ORDER NO. AD8906212C2

Service Manual

Portable Stereo CD System

Radio Cassette

RX-DS30

COMPACT disc DIGITAL AUDIO

DIGITAL

Color

(K) ..... Black Type

Area

Country Code	Areas	Color
(EB)	Great Britain	(K)
(EG)	Continental Europe Third Region	

RX-FD55 MECHANISM SERIES (AR300)

■ SPECIFICATIONS

General:

Power Requirement:	AC; (EB)...240V, 50 Hz (EG)...220 V, 50 Hz Battery; 15 V (10 UM-1, R20/LR20 size batteries)
Power Consumption:	43 W (AC only)
Power Output:	50 W (25 W×2)...PMPO
Speaker:	Woofer; 12 cm×2 PM Dynamic speaker (2.7Ω)
Input:	MIX MIC; 2.5 mV/200~600Ω, Ø3.5 AUX; 200 mV, 47 kΩ
Output:	HEADPHONES; 32Ω, Ø3.5 CD; 0.6 Vrms (CD 0 dB)
Dimensions:	666 (W)×187 (H)×217 (D) mm
Weight:	5.8 kg without batteries

Disc Player Section:

Sampling Frequency:	44.1 kHz
D-A Conversion:	2 DAC 4 time over sampling
Beam Source:	Semiconductor laser (wavelength 780 nm)
No. of Channels:	2 channels, stereo
Frequency Range:	20~20,000 Hz (+1/−2 dB)
Dynamic Range:	93 dB (1 kHz)
S/N Ratio:	95 dB (1 kHz)
Wow and Flutter:	Unmeasurable

Radio Section:

Frequency Range:	FM; 87.5~108 MHz MW; 522~1611 kHz LW; 146~288 kHz
Intermediate Frequency:	FM; 10.7 MHz AM; 459 kHz
Sensitivity:	FM; 3.6 µV (S/N: 30 dB) MW; 89 µV/m (S/N: 20 dB) LW; 89 µV/m (S/N: 20 dB)

Tape Deck Section:

Frequency Range:	40~16,000 Hz (with normal tape) 40~17,000 Hz (with CrO_2 tape)
Recording System:	AC bias (67 kHz), AC erase
Tape Speed:	4.8 cm/s
Monitor System:	Variable sound monitor
Track System:	4-track 2-channel stereo recording and playback

Timer/Clock:

Power Supply:	Battery; DC 6 V (4 UM-3, R6/LR6 size batteries)

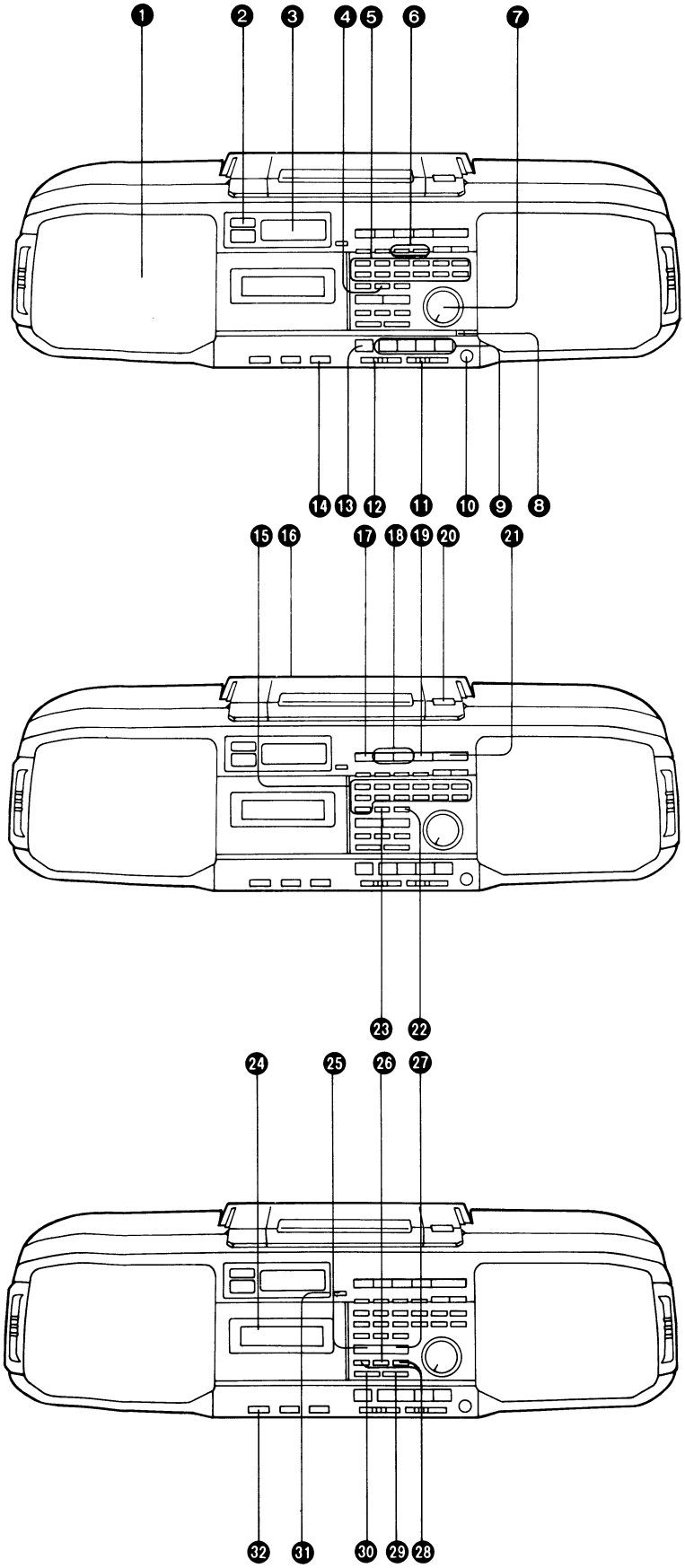
Design and specifications are subject to change without notice.

Panasonic®

Matsushita Electric Industrial Co., Ltd.
Central P.O. Box 288, Osaka 530-91, Japan

CAUTION:
THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

LOCATION OF CONTROLS



TUNER/GENERAL CONTROLS

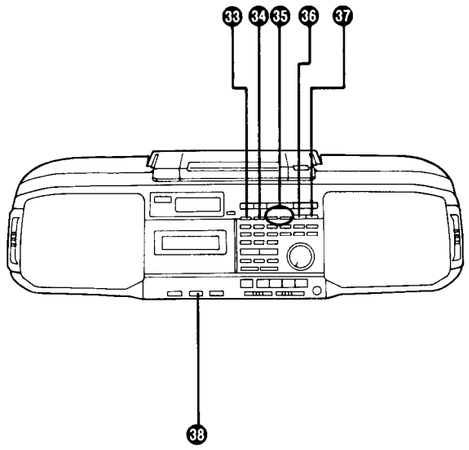
❶ **Speakers (12 cm, 2.7Ω)**
❷ **Tuning Indicator (TUNING)**
❸ **Multi Display**
❹ **Preset Memory Button (PROGRAM)**
❺ **Preset Tuning Buttons**
❻ **Tuning Buttons (TUNING)**
❼ **Volume Control (VOLUME)**
❽ **AC Connection Indicator**
❾ **Function Selectors and Indicators (TAPE/TUNER/CD/AUX)**
"TUNER" can also be used for Band Selector.
❿ **Headphones Jack (PHONES) (∅3.5, 32Ω)**
⓫ **Tone Control (TONE)**
⓬ **XBS Level Control (XBS LEVEL)**
⓭ **Operation Switch and Indicator (OPERATION)**
The main source can also be turned on by pressing the Function Selector.
⓮ **FM Mode Selector/Beat Proof Switch (FM MODE/B.P)**

CD CONTROLS

⓯ **Numeric Buttons**
⓰ **Disc Compartment Cover**
⓱ **Repeat Button (REPEAT)**
⓲ **Skip/Search Buttons**
(⏮/◁◁ • ▷▷/⏭)
⓳ **Pause/Edit Pause Button (▯▯/E.P)**
⓴ **CD Eject Button (⏏ CD EJECT)**
㉑ **Play/Stop Button (▷/□)**
㉒ **Cancel Button (CANCEL)**
㉓ **Program Button (PROGRAM)**

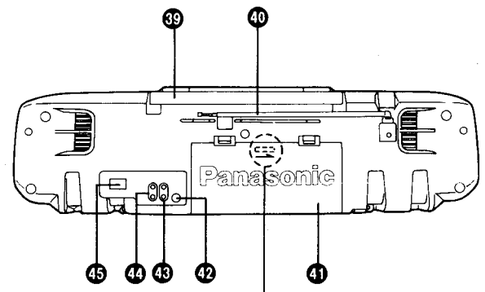
DECK CONTROLS

㉔ **Cassette Compartment**
㉕ **Reverse Playback Button and Indicator (◁)**
㉖ **Stop Button (□)**
㉗ **Forward Playback Button and Indicator (▷)**
㉘ **Fast Buttons (◁◁ • ▷▷)**
㉙ **ATLS Button and Indicator (ATLS)**
㉚ **Rec Pause Button and Indicator (○▯▯)**
㉛ **Eject Button (⏏ EJECT)**
㉜ **Reverse Mode Selector (REVERSE MODE)**



TIMER CONTROLS

- ㉝ ON/OFF Time Button (ON/OFF TIME)
- ㉞ Adjust Button (ADJUST)
- ㉟ Time Set Buttons
- ㊱ Sleep Button (SLEEP)
- ㊲ Timer Button (TIMER)
- ㊳ Timer Recording Switch (TIMER-REC)



When the tape is caught in the pinch roller, etc. Release the tape by turning the pulley on the motor with the screwdriver in the direction of the arrow.

REAR PANEL

- ㊴ Handle
- ㊵ Telescopic Antenna
- ㊶ Battery Compartment
- ㊷ Microphone Jack (MIX MIC) (2.5 mV/200~600Ω, ∅3.5)
- ㊸ CD Output Jacks (CD OUT) (0.6 Vrms)
- ㊹ Auxiliary Input Jacks (AUX IN) (200 mV/47 kΩ)
- ㊺ AC Socket (AC IN ~)

MULTI DISPLAY

■ FOR TUNER

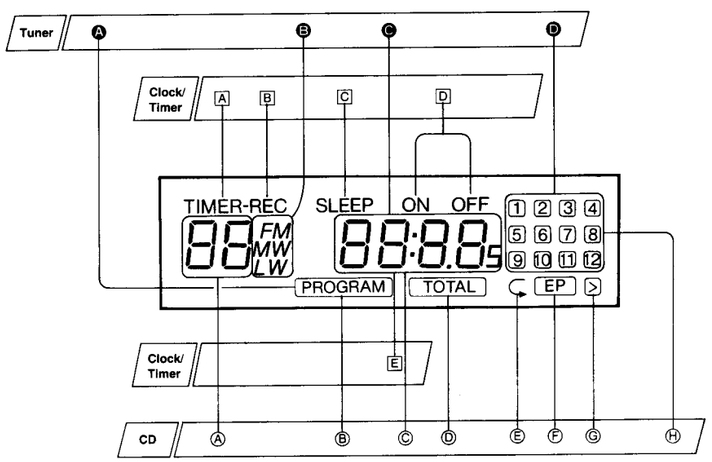
- Ⓐ Preset Memory Indicator (PROGRAM)
- Ⓑ Band Indicators (FM/LW/MW)
- Ⓒ Frequency Display
- Ⓓ Preset Channel Display

■ FOR CLOCK/TIMER

- [A] Timer Indicator (TIMER)
- [B] Timer Recording Indicator (TIMER-REC)
- [C] Sleep Indicator (SLEEP)
- [D] Timer ON/OFF Indicator (ON/OFF)
- [E] Time Display

■ FOR COMPACT DISC

- Ⓐ Track Display
- Ⓑ Program Indicator (PROGRAM)
- Ⓒ Playing Time Display
- Ⓓ Total Time Indicator (TOTAL)
- Ⓔ Repeat Play Indicator (↻)
- Ⓕ Edit-Pause Indicator (EP)
- Ⓖ Over Mark Indicator (▷)
- Ⓗ Music Matrix

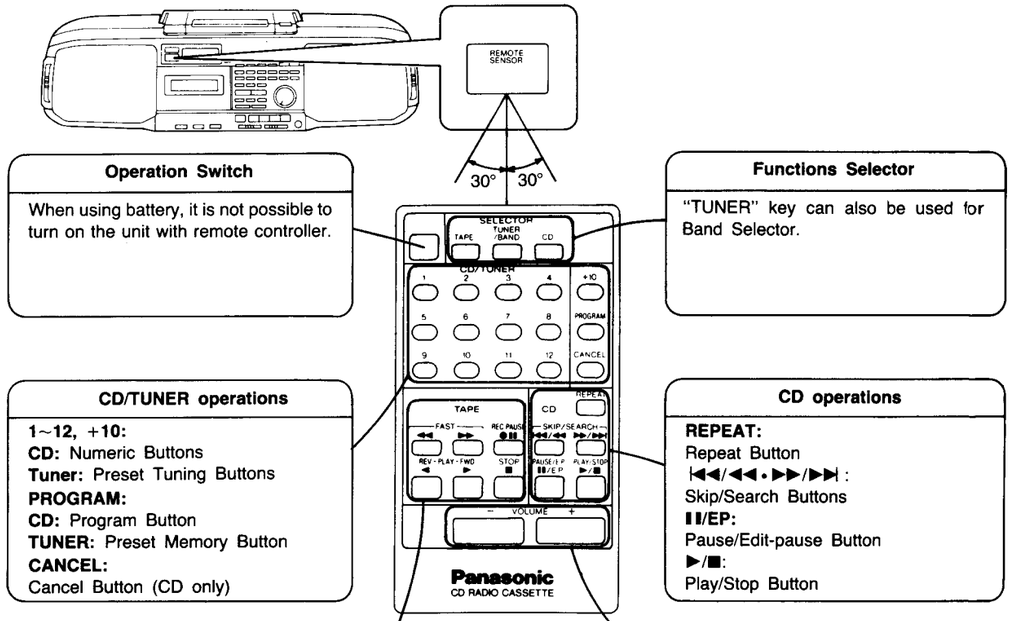


REMOTE CONTROL OPERATION

■ How to Operate the Remote Controller

Aim the transmitter of the remote controller at the Remote Control Sensor on the unit, and press the necessary buttons on the remote controller.
First, press a button on the function section, and then press a button on the operation section, or another key.

- The receiving angle is approx. 60° (30° in each of the left, right, up, and down directions).
- The maximum usable distance in about 7 m when the Remote Controller is aimed directly at the Remote Control Sensor.



Operation Switch

When using battery, it is not possible to turn on the unit with remote controller.

Functions Selector

"TUNER" key can also be used for Band Selector.

CD/TUNER operations

1~12, +10:
CD: Numeric Buttons
Tuner: Preset Tuning Buttons
PROGRAM:
CD: Program Button
TUNER: Preset Memory Button
CANCEL:
Cancel Button (CD only)

CD operations

REPEAT:
Repeat Button
|◀◀/◀◀ • ▶▶/▶▶|:
Skip/Search Buttons
❚❚/EP:
Pause/Edit-pause Button
▶/■:
Play/Stop Button

TAPE operations

◀:
Reverse Playback Button
▶:
Forward Playback Button
◀◀ • ▶▶:
Fast Buttons
● ❚❚:
Rec-Pause Button
■:
Stop Button

Volume Controls

■ PRECAUTION OF LASER DIODE

CAUTION: This product utilizes a laser diode with the unit turned "on", invisible laser radiation is emitted from the pick up lens.
Wave length: 780 nm
Maximum output radiation power from pick up: 100 µW/VDE

Laser radiation from the pick up lens is safety level, but be sure the followings:

1. Do not disassemble the optical pick up unit, since radiation from exposed laserd diode is dangerous.
2. Do not adjust the variable resistor on the pickup unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pick up lens for a long time.

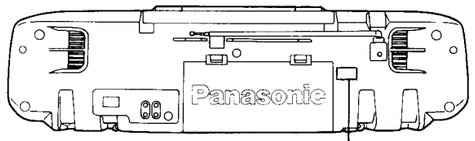
ACHTUNG: Dieses produkt enthält eine laserdiode. Im eingeschalteten zustand wird unsichtbare laserstrahlung von der lasereinheit abgestrahlt.

Wellenlänge: 780 nm
Maximale strehlungsleistung der lasereinheit: 100 µW/VDE

Die strahlung an der lasereinheit ist ungefährlich, wenn folgende punkte beachtet werden:

1. Die lasereinheit nicht zerlegen, da die strahlung an der freigelegten laserdiode gefährlich ist.
2. Den werksseitig justierten einstellregler der lasereinreit nicht verstellen.
3. Nicht mit optischen instrumenten in die fokussierlinse blicken.
4. Nicht über längere zeit in die fokussierlinse blicken.

ADVARSEL: I dette a apparat anvendes laser.



DANGER-Invisible laser radiation when open and interlock defeated. AVOID DIRECT EXPOSURE TO BEAM.
(Inside of product)

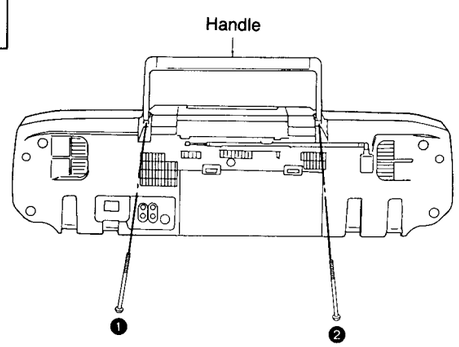
VORSICHT-Unsichtbare Laserstrahlung. wenn Abdeckung geöffnet und Sicherheitsverriegelung überbrückt. Nicht dem Strahl aussetzen.
(Im Inneren des Gerätes)

CLASS 1
LASER PRODUCT
LUOKAN 1 LASERLAITE

ADVARSEL. Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.
(Indersiden at apparatet)

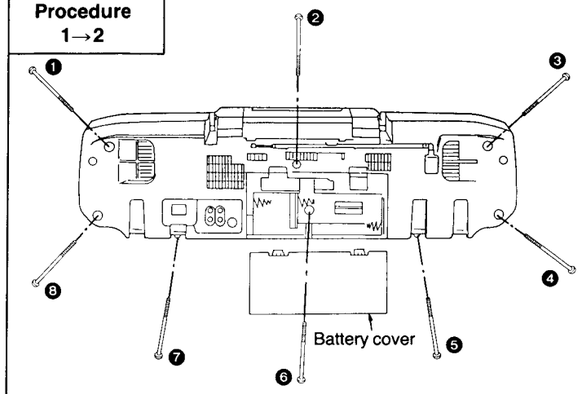
DISASSEMBLY INSTRUCTIONS

Ref. No. 1	Removal of the Handle
Procedure 1	

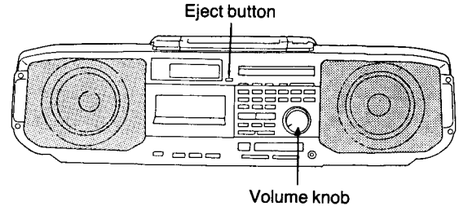


●Remove the 2 screws (❶, ❷).

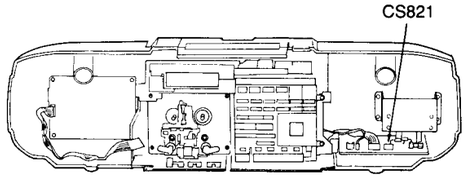
Ref. No. 2	Removal of the Front Cabinet
Procedure 1→2	



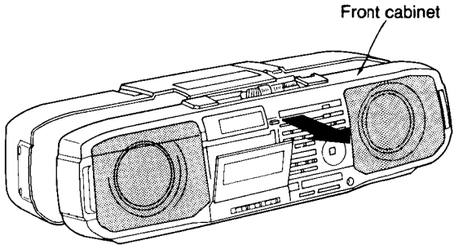
1. Remove the battery cover.
2. Remove the 8 screws (❶~❽).



3. Pull out the volume knob.
4. Press the eject button.

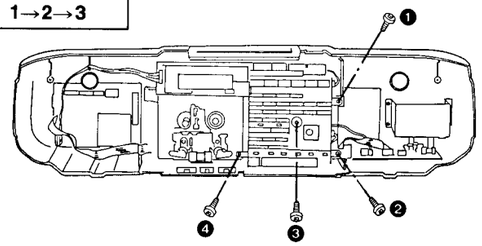


6. Remove the connector (CS821).

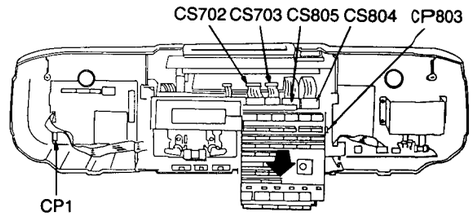


5. Remove the front cabinet in the direction of the arrow.

Ref. No. 3	Removal of the Operation/LCD P.C.B.
Procedure 1→2→3	

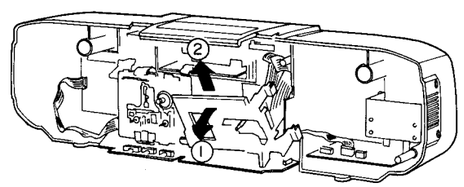


1. Remove the 4 screws (❶~❹).

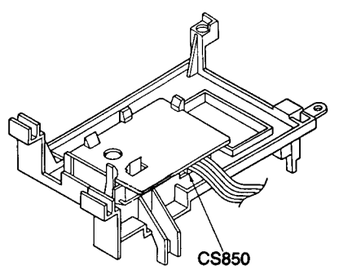


2. Remove the 6 connectors (CP1, CS702, CS703, CP803, CS804 and CS805).

Ref. No. 4	Removal of the Chassis and Volume P.C.B.
Procedure 1→2→3→4	



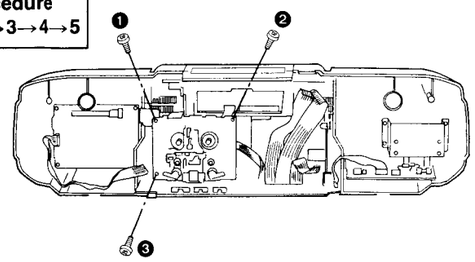
1. Pull down the chassis in the direction of arrow ① and then remove it in the direction of arrow ②.



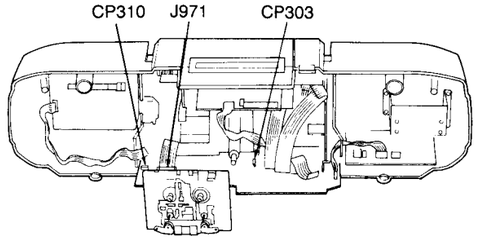
2. Remove the connector (CS850).

Ref. No. 5 — **Removal of the Mechanism**

Procedure 1→2→3→4→5



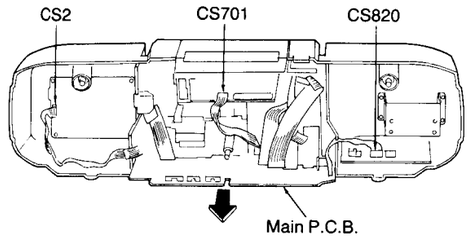
1. Remove the 3 screws (❶~❸).



2. Remove the 3 connectors (CP303, CP310 and J971).

Ref. No. 6 — **Removal of the Main P.C.B.**

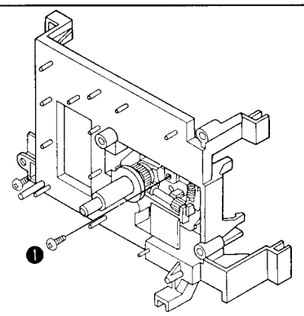
Procedure 1→2→3→4→5→6



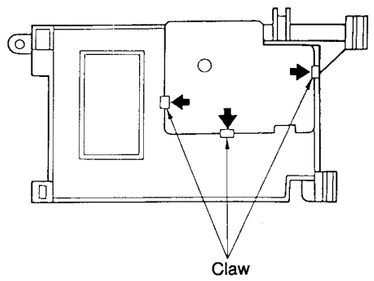
1. Remove the 3 connectors (CS2, CS701 and CS820).
2. Pull out the main P.C.B.

Ref. No. 7 — **Removal of the Volume P.C.B.**

Procedure 1→2→3→4→7



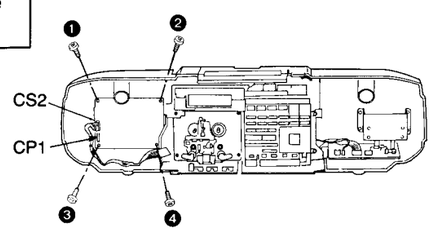
1. Remove the screw ❶.



2. Remove 3 claws in the direction of arrows.

Ref. No. 8 — **Removal of the Tuner P.C.B.**

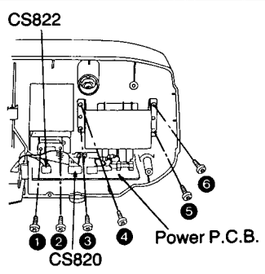
Procedure 1→2→8



1. Remove the 2 connectors (CP1 and CS2).
2. Remove the 4 screws (❶~❹).

Ref. No. 9 — **Removal of the Power P.C.B.**

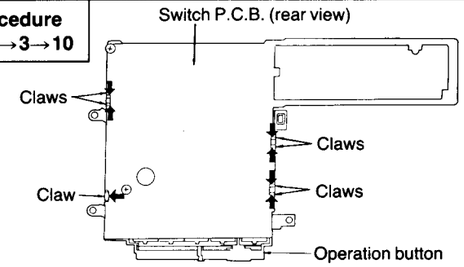
Procedure 1→9



1. Remove the 6 screws (❶~❻).
2. Remove the 2 connectors (CS820 and CS822).

Ref. No. 10 — **Removal of the Operation Button**

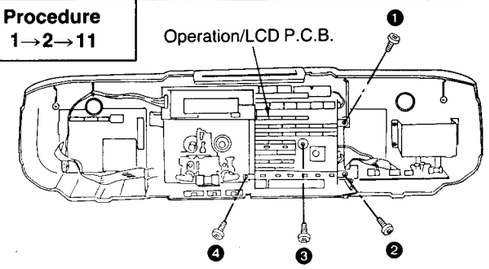
Procedure 1→2→3→10



●Remove the 7 claws in the direction of the arrows.

Ref. No. 11 — **Removal of the Upper Cabinet**

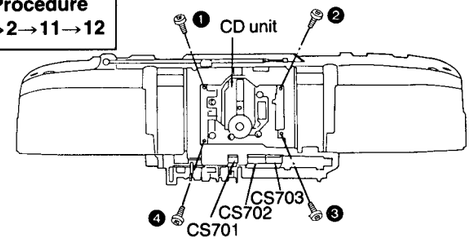
Procedure 1→2→11



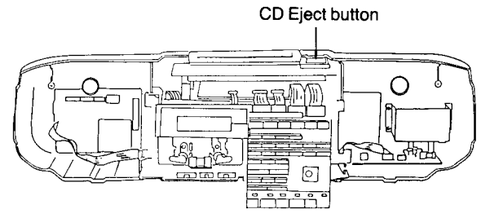
1. Remove the 4 screws (❶~❹) and Operation/LCD P.C.B.

Ref. No. 12 — **Removal of the CD Unit and CD P.C.B.**

Procedure 1→2→11→12



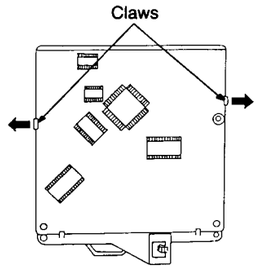
1. Remove the 4 screws (❶~❹).
2. Remove the 3 connectors (CS701, CS702 and CS703).



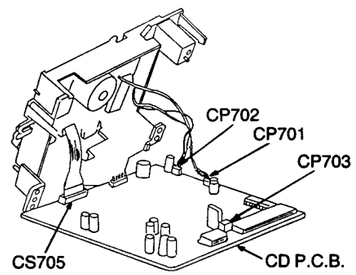
2. Press the CD Eject button.

Ref. No. 13 — **Removal of the CD P.C.B.**

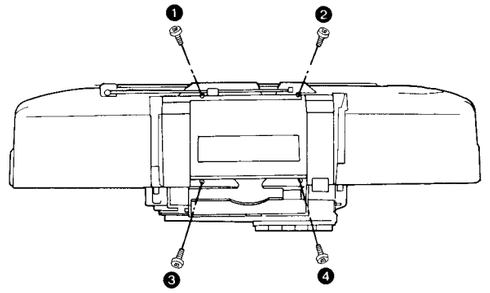
Procedure 1→2→11→12→13



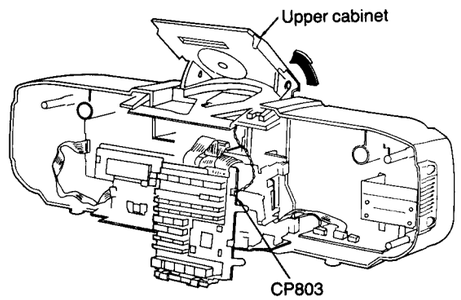
1. Remove the 2 claws in the direction of the arrows.



2. Remove the 4 connectors (CP701, CP702, CP703 and CS705).



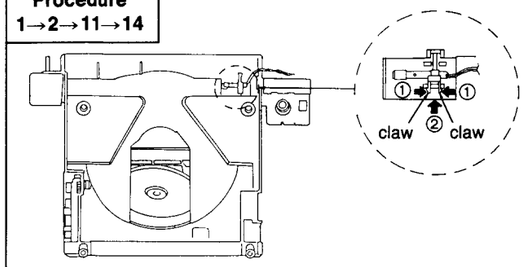
3. Remove the 4 screws (❶~❹).



4. Remove the upper cabinet in the direction of the arrow.
5. Remove the connector (CP803).

Ref. No. 14 — Removal of the Open/Close Switch

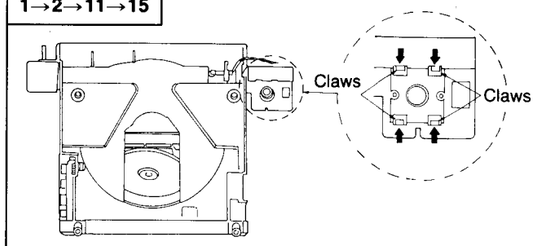
Procedure 1→2→11→14



●Remove 2 claws in the direction of arrow ① and remove the open/close switch in the direction of arrow ②.

Ref. No. 15 — Removal of the CD Eject Button

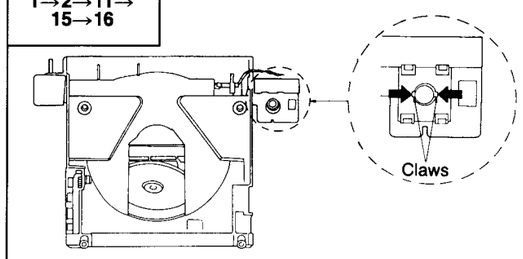
Procedure 1→2→11→15



●Remove the 4 claws in the direction of the arrows.

Ref. No. 16 — Removal of the CD Eject Lever

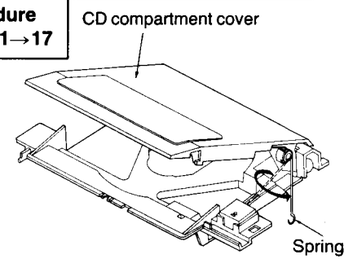
Procedure 1→2→11→15→16



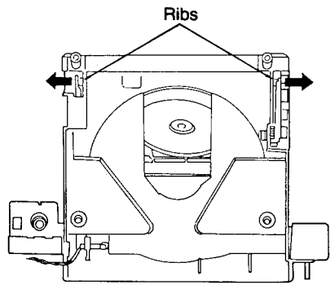
●Remove the 2 claws in the direction of the arrows.

Ref. No. 17 — Removal of the CD Compartment Cover

Procedure 1→2→11→17



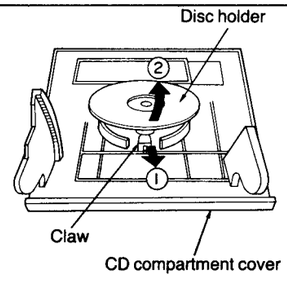
1. Remove the spring.



2. Remove the 2 ribs in the direction of the arrows.

Ref. No. 18 — Removal of the Disc Holder

Procedure 1→2→11→17→18

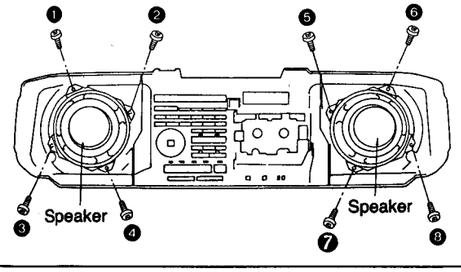


●Remove the claw in he direction of arrow ① and remove the disc holder in the direction of arrow ②.

Ref. No. 19 — Removal of the Speaker

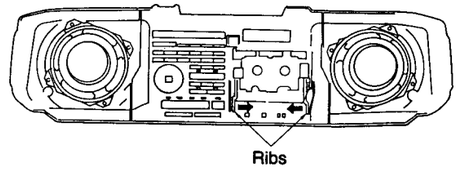
Procedure 1→2→19

●Remove the 8 screws (❶~❽).



Ref. No. 20 — Removal of the Cassette Holder

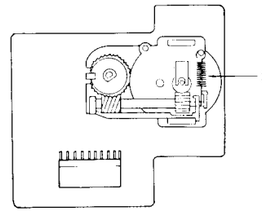
Procedure 1→2→20



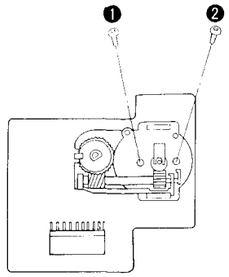
●Remove the 2 ribs in the direction of the arrows.

Ref. No. 21 — Removal of the Volume Chassis

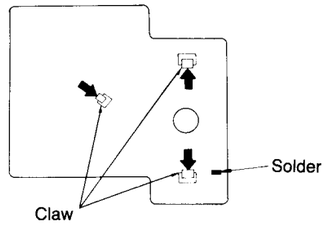
Procedure 1→2→3→4→7→21



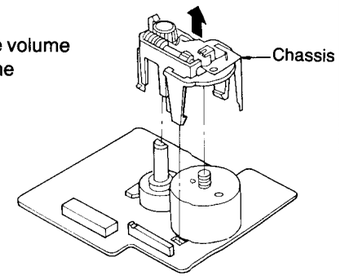
1. Remove the spring.



2. Remove 2 screws (❶, ❷).



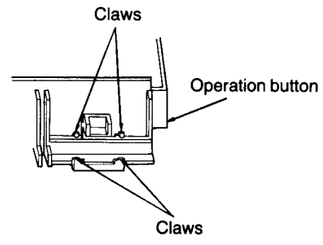
3. Remove the solder.
4. Release 3 claws in the direction of arrows.



5. Remove the volume chassis in the direction of arrow.

Ref. No. 22 — Removal of the XBS Level and XBS Control Knob

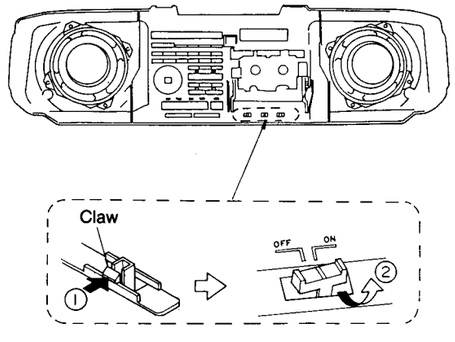
Procedure 1→2→3→22



●Remove the 4 claws.

Ref. No. 23 — Removal of the Reverse Mode, Timer REC and FM Mode Knob

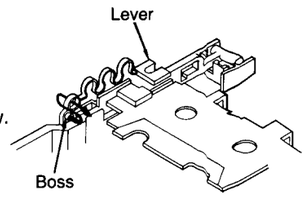
Procedure 1→2→23



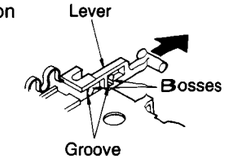
●Remove the claw in the direction of arrow ① and then remove the knob in the direction of arrow ②.

Ref. No. 24 — Removal of the Cassette Eject Button

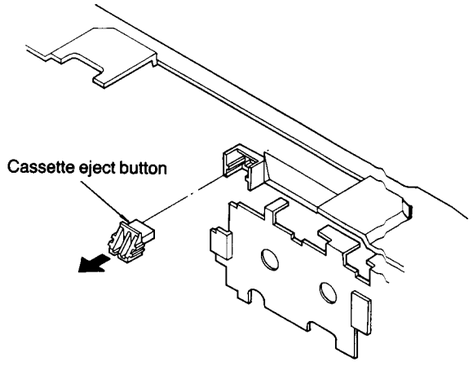
Procedure 1→2→24



1. Remove the boss in the direction of arrow.

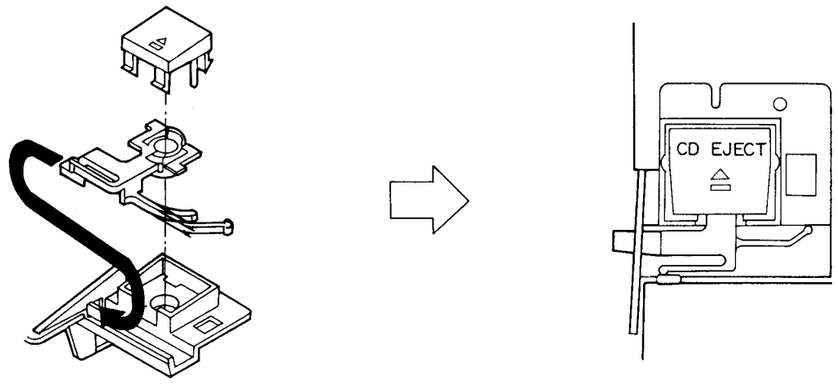


2. Slide the lever in the direction of arrow and then remove 2 bosses.

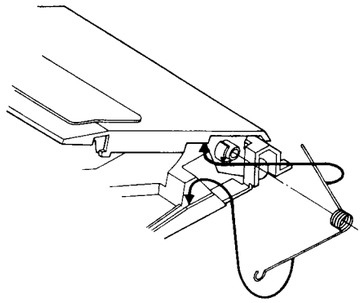


3. Remove the Cassette eject button in the direction of the arrow.

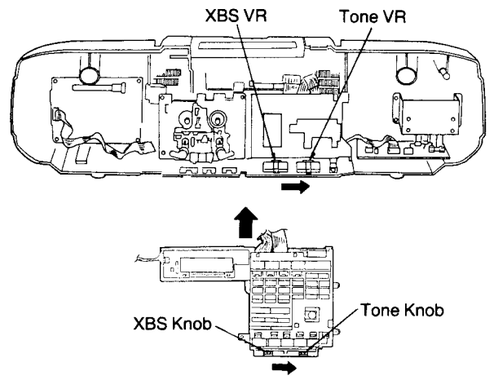
■ CD EJECT BUTTON ASSEMBLY



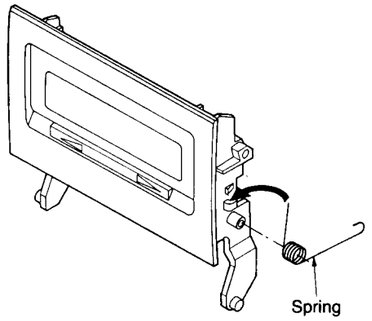
■ CD COMPARTMENT COVER ASSEMBLY

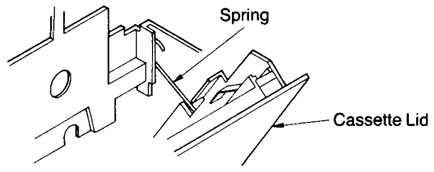


■ OPERATION BUTTON ASSEMBLY

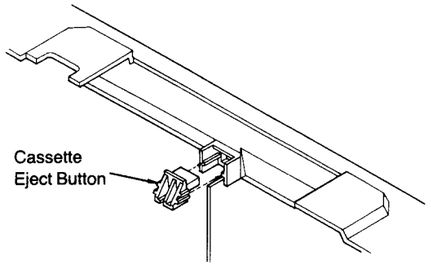


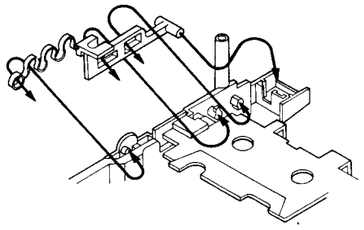
■ CASSETTE HOLDER ASSEMBLY





■ CASSETTE EJECT BUTTON ASSEMBLY

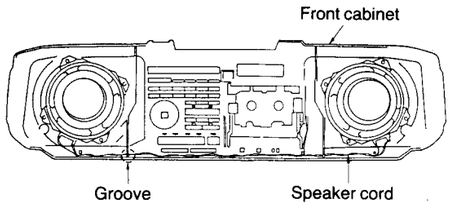




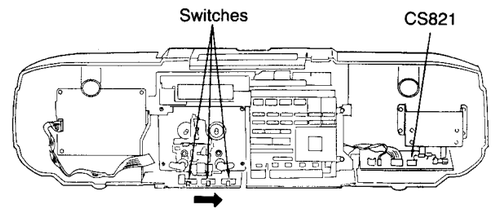
1. Insert the cassette eject button.

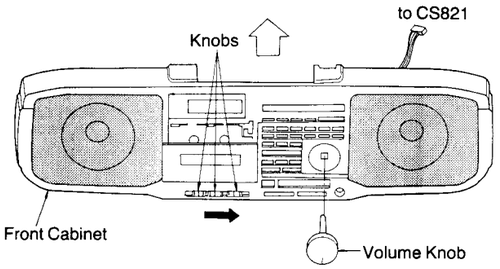
2. Replace the eject lever.

■ FRONT CABINET ASSEMBLY

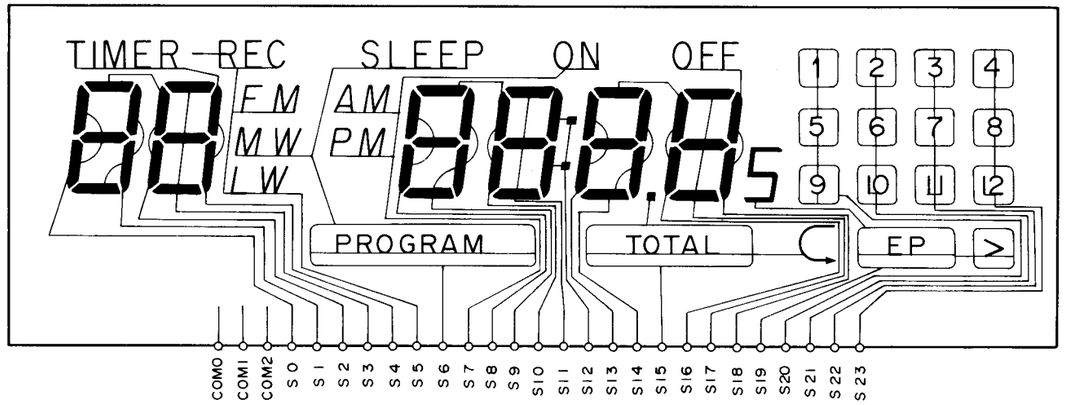


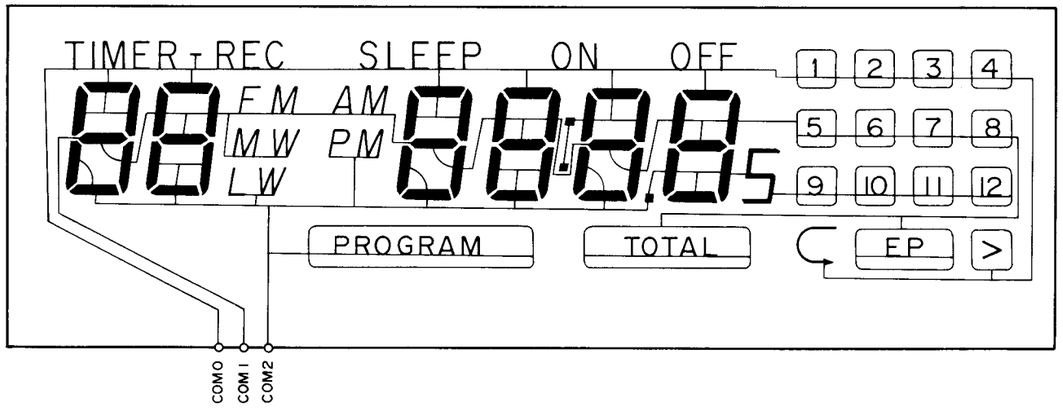
1. Insert the speaker cord in the groove.
2. Move the switch boss and rotate the knob in the direction of the arrows.
3. Connect connector CS821.
4. Reinstall the front cabinet.
5. Reinstall the volume knob.



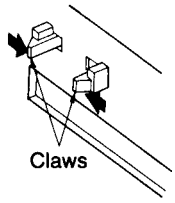


LIQUID CRYSTAL DISPLAY (LCD)



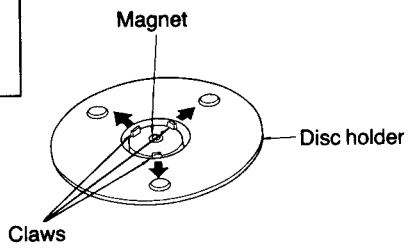


Ref. No. 25	Removal of the Panasonic Badge
Procedure 1→2→25	



1. Remove the 2 claws in the direction of the arrows.

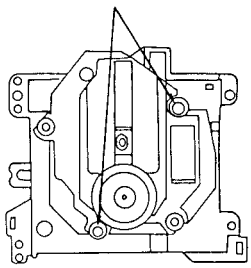
Ref. No. 26	Removal of the Disc Magnet
Procedure 1→2→11→ 17→18→26	

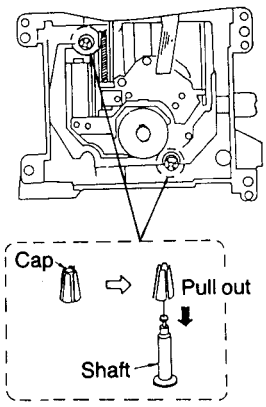


- Remove the 3 claws in the direction of the arrows.

Ref. No. 27	Removal of the CD Unit
Procedure 1→2→11→ 12→13→27	

Shafts with caps installed.

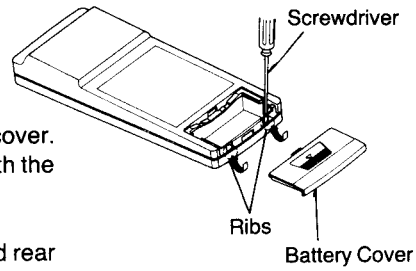


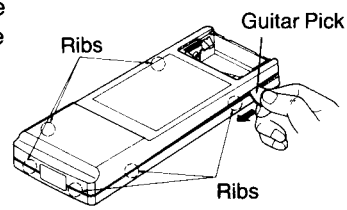


- Remove the adhesive off the caps installed in the shafts with a cutter or similar tool and then remove the caps. Remove the traverse unit and chassis.
- To reinstall the caps, use bonding adhesive.

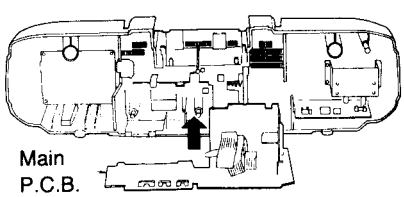
Ref. No. 28	Disassemble the Remote Control
Procedure 28	

1. Remove the battery cover.
2. Release the 2 ribs with the tip of a screwdriver.
3. Insert a guitar pick between the front and rear cabinets of the remote control on the battery case side and then slide it in the direction of the arrow to release the ribs.

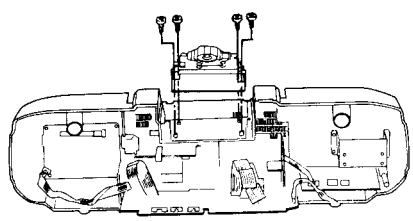




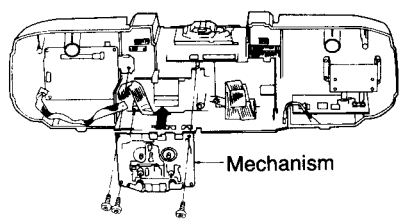
■ ASSEMBLY INSTRUCTION



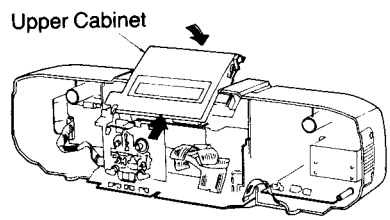
1. Insert the main P.C.B.



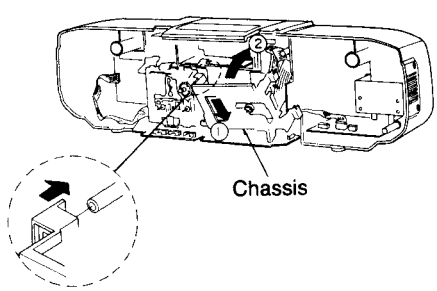
2. Replace the CD unit.



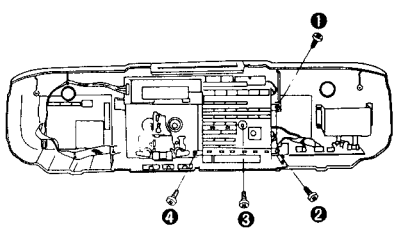
3. Replace the mechanism.



4. Replace the upper cabinet.



5. Replace the chassis.



6. Replace the operation button.

RX-DS30 RX-DS30

SCHEMATIC DIAGRAM •for Tuner Circuit

(Parts list on pages 55~60.)

A TUNER CIRCUIT

Q19 RVTDTC114TST MUTING

Q20 RVTDTA143XST SWITCHING

IC1 RVITA7358FT FM FRONT END

Q1,2 2SC3313BTA FM IF AMP

IC2 TA8132F FM/AM IF AMP, DET & AM OSC, MIX

Q3 2SC1674LTA BUFFER AMP (FM OSC)

Q11,12 2SA1309RTA LW/MW SELECT

D4 RVDKV1235ZB

Q13,14 2SC3311RTA LW/MW SELECT

Q15 RVTDTA143XST SWITCHING (LW : ON)

Q7,8 2SC3311RTA FM LOOP FILTER

Q16,17 2SC3311RTA LW/MW LOOP FILTER

Q9,10 2SC3311RTA DC-DC CONVERTER

Q4 2SC3311RTA MUTING

Q18 2SK381CTA SWITCHING (ST/MONO)

Q5,6 RVTDTA143XST POWER SUPPLY

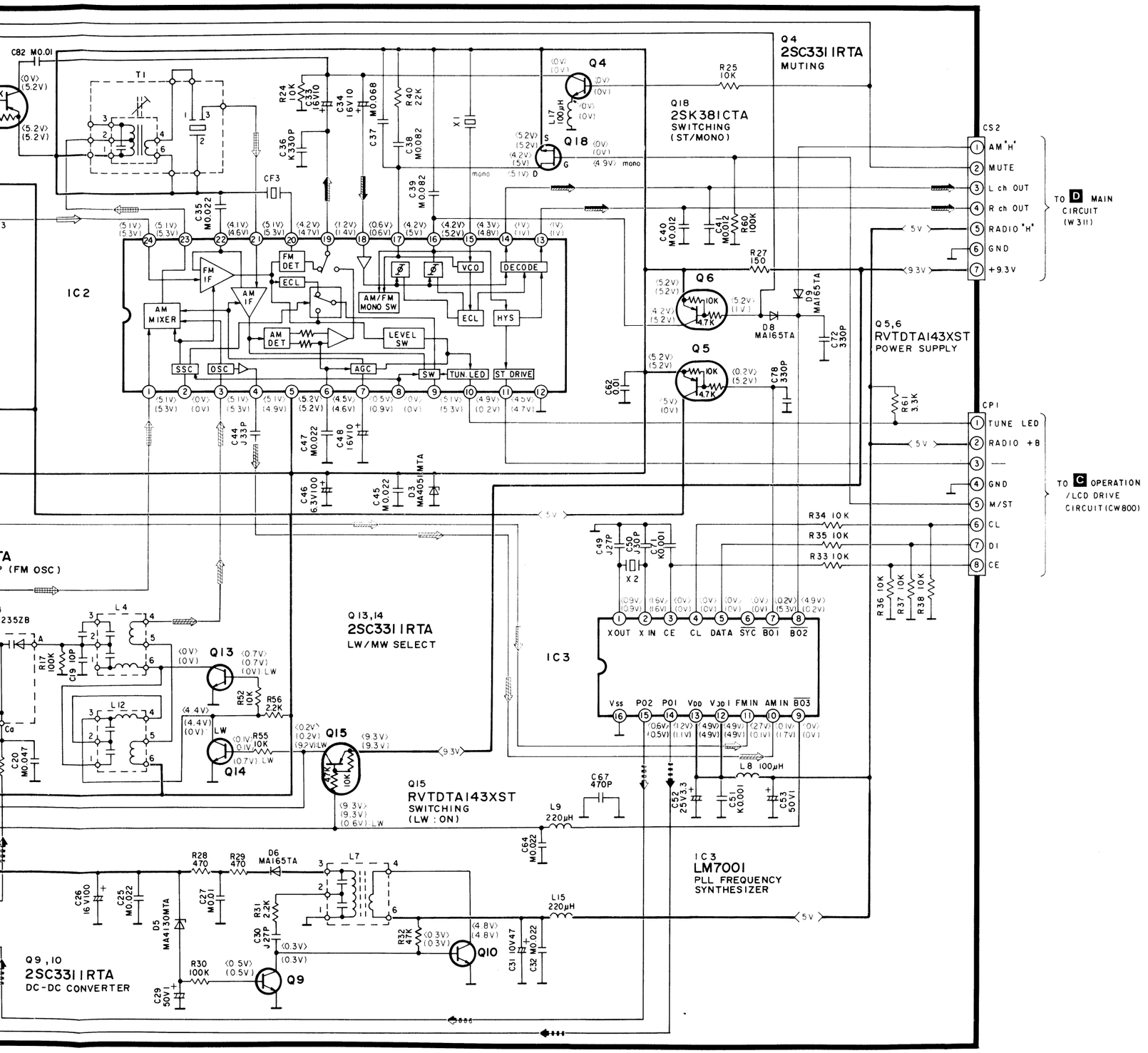
IC3 LM7001 PLL FREQUENCY SYNTHESIZER

TELESCOPIC ANTENNA

CS2: AM "H", MUTE, L ch OUT, R ch OUT, RADIO "H", GND, +9.3V

CP1: TUNE LED, RADIO +B, —, GND, M/ST, CL, DI, CE

5 6 7 8 9 10 11 12 13 14



Notes:

1. S701: Reset switch.
2. S901: Laser ON/OFF switch.
3. VR701: Best eye adjustment VR.
4. VR702: Tracking balance adjustment VR.
5. VR703: Focus offset adjustment VR.
6. VR704: Focus gain adjustment VR.
7. VR705: Tracking gain adjustment VR.
8. VR706: Tracking offset adjustment VR.
9. DC voltage measurements are taken with electronics voltmeter.
   The negative terminal of the battery provides negative meter connection point.
   ( )...MW (( ))...CD
   < >...FM

•This schematic diagram may be modified at any time with the development of new technology.

: FM SIGNAL LINE
: LW/MW SIGNAL LINE
: FM/LW/MW SIGNAL LINE
: FM OSC SIGNAL LINE
: LW/MW OSC SIGNAL LINE
: FM V-cap CONTROL SIGNAL LINE
: LW/MW V-cap CONTROL SIGNAL LINE
: CD SIGNAL LINE
: +B LINE

SCHEMATIC DIAGRAM ●for CD Circuit

(Parts list on pages 55~60.)

B CD CIRCUIT

IC703 AN8377N MOTOR DRIVE

IC701 AN8373SE2 CD SERVO SYSTEM

IC702 AN8374SE2 PWM DRIVE/PLL

IC704 MN6617 SIGNAL PROCESS

IC705

IC706

IC707 SM5807ESET DIGITAL FILTER

IC708 UPD6372GSE2 D/A CONV./BUFFER AMP

Q701 2SA1309STA LASER AMP

Q703 UN4110TA SWITCHING (DE-EMPHASIS)

CP704 S901 LASER ON/OFF

CP702 TRAVERSE MOTOR

CP703 S701 REST SW

CS703 TO C OPERATION/LCD DRIVE CIRCUIT (W802)

CS702 TO C OPERATION/LCD DRIVE CIRCUIT (W801)

16.9344MHz X701

5 6 7 8 9 10 11 12 13 14

IC701
AN8373SE2
CD SERVO SYSTEM

Q701
2SA1309STA
LASER AMP

IC704
MN6617
SIGNAL PROCESS

IC706
TA8410P
MOTOR DRIVE

IC705
LC35I7BMLTP
DE INTERLEAVE

IC707
SM5807ESET
DIGITAL FILTER

IC708
UPD6372GSE2
D/A CONV./BUFFER AMP

Q703
UN4110TA
SWITCHING
(DE-EMPHASIS)

Q704,705
UN4216TA
SWITCHING
(DE-EMPHASIS)

CP705
VREF(GND)
TP(FE,O)
TP(TE,O)
To Servo gain adjuster

CP701
SPINDLE MOTOR

OPTICAL PICKUP CIRCUIT
CS705
FD+
FD−
TD+
TD−
GND
PD
LD
+5V
RF
+5V
A1
A4
A2
A3
GND

CS701
L ch OUT
GND
R ch OUT
GND
+7.5V
+5V
TO D MAIN CIRCUIT (W312)

TP705 TP704 TP701

16.9344MHz X701

RX-DS30
RX-DS30

SCHEMATIC DIAGRAM •for LCD/Key Operation Circuit

(Parts list on pages 53～60.)

C OPERATION/LCD DRIVE CIRCUIT

Z801 LCD DISPLAY(LD-BU9412AZ)

Z800 REMOTE SENSOR (AIQH3029HO)

S900 (OPEN/CLOSE)

Q800～802 RVTDTA114TST INTERFACE

IC800 M50932-165FP SYSTEM CONTROL/ LCD DRIVE

IC802 M50253P LED DRIVE

IC801 S8054HN-T RESET SIGNAL GENERATOR

Q807 RVTDTA114EST POWER SUPPLY

Q808 RVTDTC114EST POWER SUPPLY CONT.

Q812,813 RVTDTC114TST INTERFACE

Q814 RVTDTC114EST MUTING

Q816 RVTDTA114EST SWITCHING (TUNER ON)

Q819 2SC3311RTA SWITCHING

Q820,823 RVTDTC114TST SWITCHING (REC PAUSE/F.PLAY)

Q803 2SC3311RTA SWITCHING (TIMER MODE)

Q822 2SC3311RTA SWITCHING (OPEN/CLOSE)

Q804,821 RVTDTC114TST SWITCHING (REST/AC BACKUP)

Q824 2SC3311RTA LED DRIVE

Q825 UN421FTA LED DRIVE

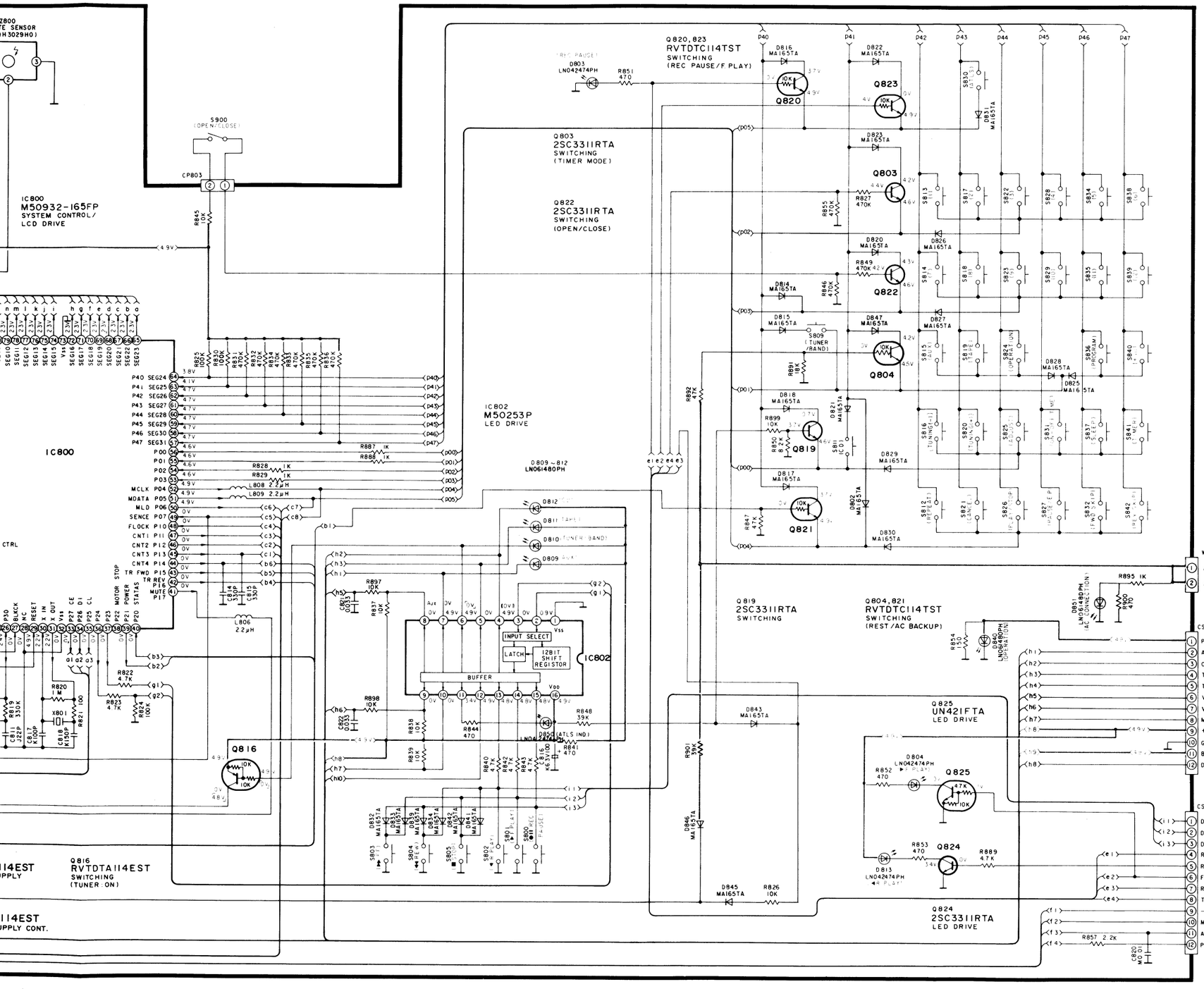
TO A TUNER CIRCUIT (CP11)

TO B CD CIRCUIT (CS702)

TO B CD CIRCUIT (CS703)

pages 53~60.)

5 6 7 8 9 10 11 12 13 14



Notes:

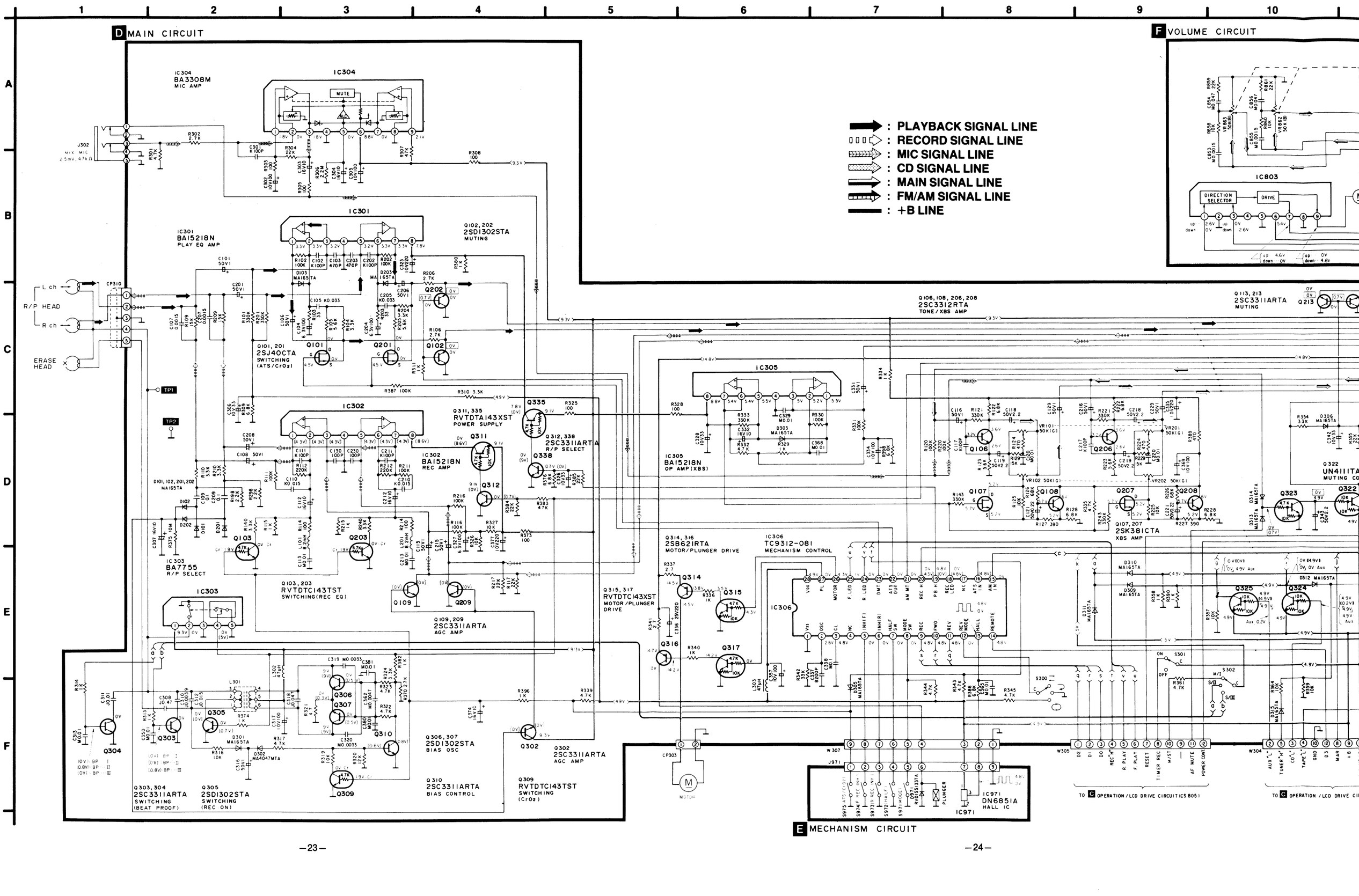
1. S800: Rec pause switch.
2. S801: FWD playback switch.
3. S802: REV playback switch.
4. S803: FF/TPS switch.
5. S804: REW/TPS switch.
6. S805: STOP switch.
7. S809: TUNER/BAND switch.
8. S811: CD switch.
9. S812: CD operation "REPEAT" switch.
10. S813: CD/TUNER "1" switch.
11. S814: CD/TUNER "7" switch.
12. S815: AUX switch.
13. S816: TIME SET/TUNING "−" switch.
14. S817: CD/TUNER "2" switch.
15. S818: CD/TUNER "8" switch.
16. S819: TAPE switch.
17. S820: TIME SET/TUNING "+" switch.
18. S821: TIME SET/TUNING "CANCEL" switch.
19. S822: CD/TUNER "3" switch.
20. S823: CD/TUNER "9" switch.
21. S824: OPERATION switch.
22. S825: TIME SET/TUNING "ADJUST" switch.
23. S826: CD OPERATION "▶/■" switch.
24. S827: CD OPERATION "❚❚/E.P" switch.
25. S828: CD/TUNER "4" switch.
26. S829: CD/TUNER "10" switch.
27. S830: ATLS switch.
28. S831: TIME SET/TUNING "ON/OFF TIME" switch.
29. S832: CD OPERATION "▶▶/▶▶❙" switch.
30. S834: CD/TUNER "5" switch.
31. S835: CD/TUNER "11" switch.
32. S836: CD/TUNER "PROGRAM" switch.
33. S837: SLEEP switch.
34. S838: CD/TUNER "6" switch.
35. S839: CD/TUNER "12" switch.
36. S840: CD/TUNER "+10" switch.
37. S841: TIMER switch.
38. S842: CD OPERATION "❙◀◀/◀◀" switch.
39. S900: CD cover open/close detect switch.
40. VR862: Volume control VR.
41. VR863: Volume control VR.
42. DC voltage measurements are taken with electronics voltmeter. The negative terminal of the battery provides negative meter connection point.

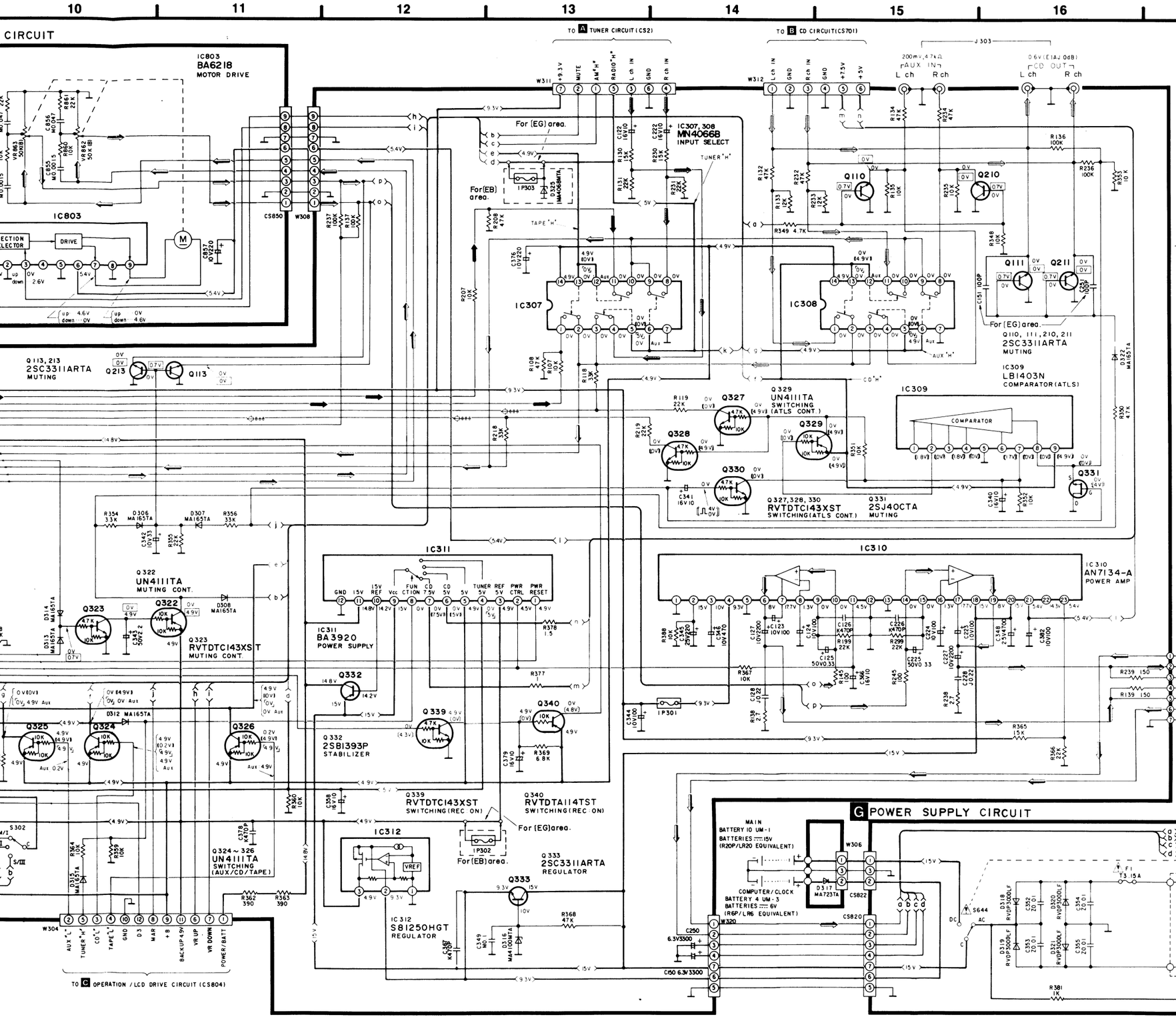
    No mark...TAPE PLAYBACK 『 』...TUNER
    (( ))...CD PLAYBACK

•This schematic diagram may be modified at any time with the development of new technology.

▬▬ : +B LINE

SCHEMATIC DIAGRAM •for Main, Mechanism, Volume and Power Supply Circuit (Parts list on pages 53~58.)





Notes:

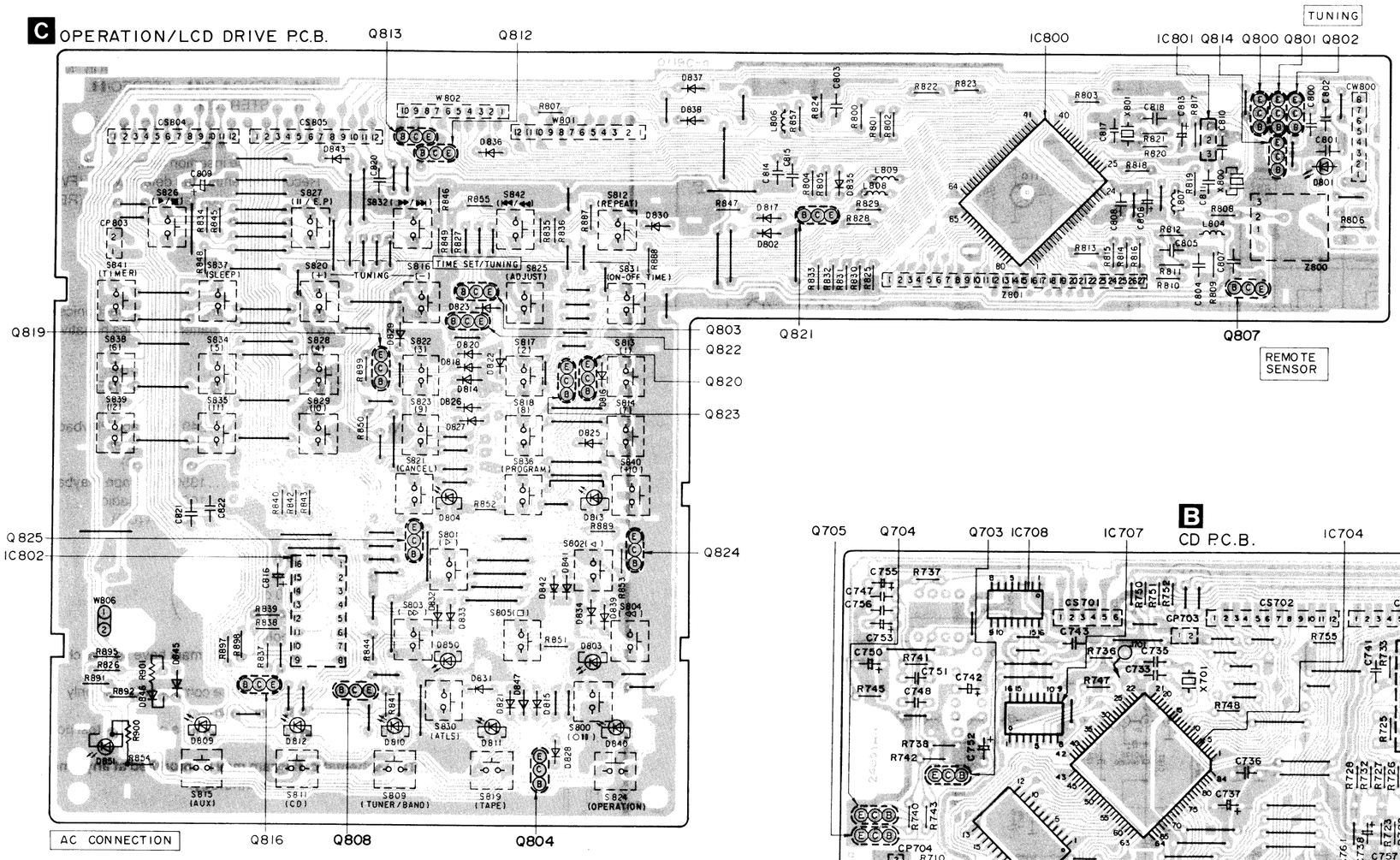
1. S300: Reverse mode switch in "⇄" position.
2. S301: Timer recording switch in "ON" position.
3. S302: FM mode select/Beat proof switch in "MONO/▮". (M/▮...MONO/▮, S/▮▮...STEREO/▮▮, S/▮▮▮...STEREO/▮▮▮)
4. S644: AC/DC select switch in "AC" position.
5. S971: Mode detect switch.
6. S972: Cassette tape insertion detect switch.
7. S973: Record prevention tab detect switch (FWD).
8. S974: Record prevention tab detect switch (REV).
9. S975: CrO_2 tape detect switch.
10. VR101, VR201: Tone control VR.
11. VR102, VR202: XBS control VR.
12. DC voltage measurements are taken with electronics voltmeter. The negative terminal of the battery provides negative meter connection point.
    No mark...PLAYBACK [ ]...RECORD
    ▭...MUTING (( ))...CD 『 』...TUNER [[ ]]...ATLS
13. Battery Current:
    Vol. min .....240 mA (Tape Playback)
    140 mA (Tuner)
    400 mA (CD)
    Vol. max .....1350 mA (Tape Playback)
    1020 mA (Radio)
    1700 mA (CD)

    Measurement instruction
    (Tape: 315 Hz, 0 dB
    Radio: FM 60 dB, 30% Mod.
    CD: 1 kHz, 0 dB)
14. Important safety notice.
    Components identified by ⚠ mark have special characteristics important for safety.
    When replacing any of these components, use only manufacturer's specified parts.
15. The mark (■) shows test point e.g. TP1 =test point 1.

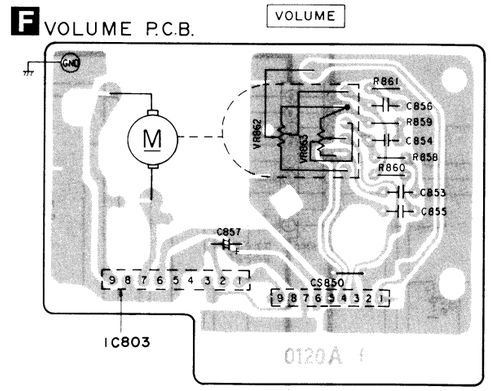
•This schematic diagram may be modified at any time with the development of new technology.

CIRCUIT BOARD DIAGRAM

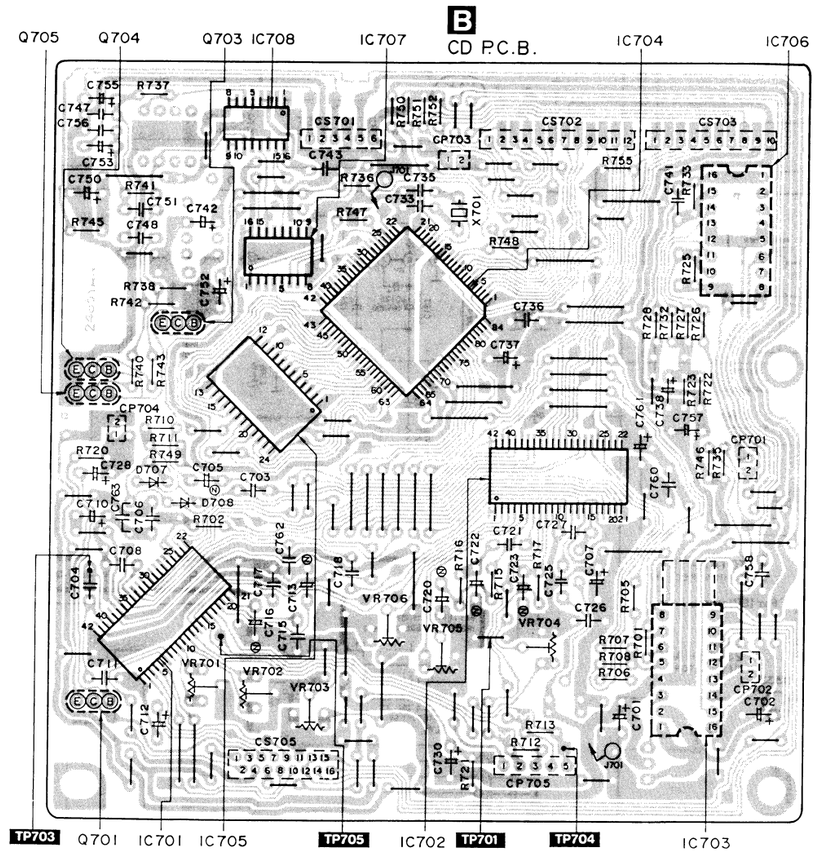
C OPERATION/LCD DRIVE P.C.B.



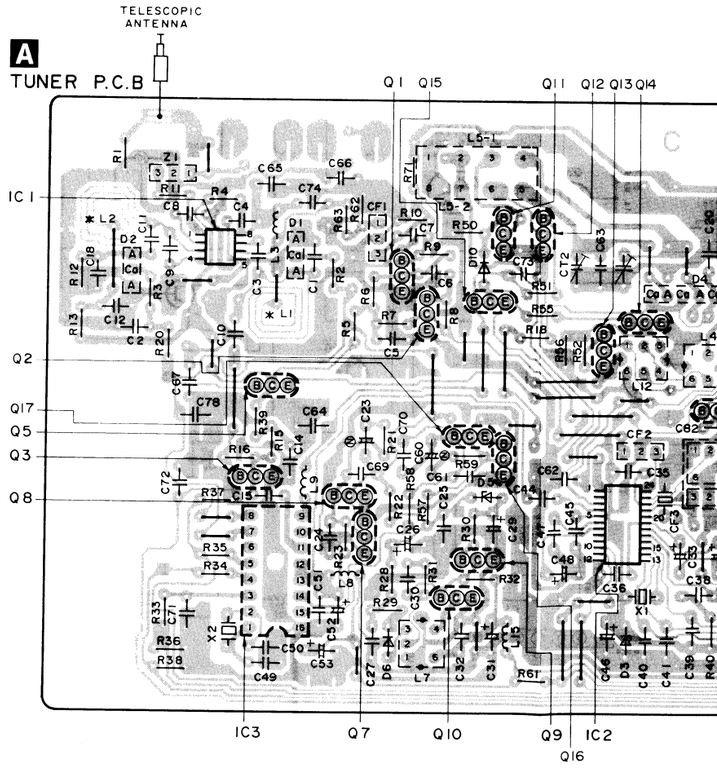
F VOLUME P.C.B.



B CD P.C.B.

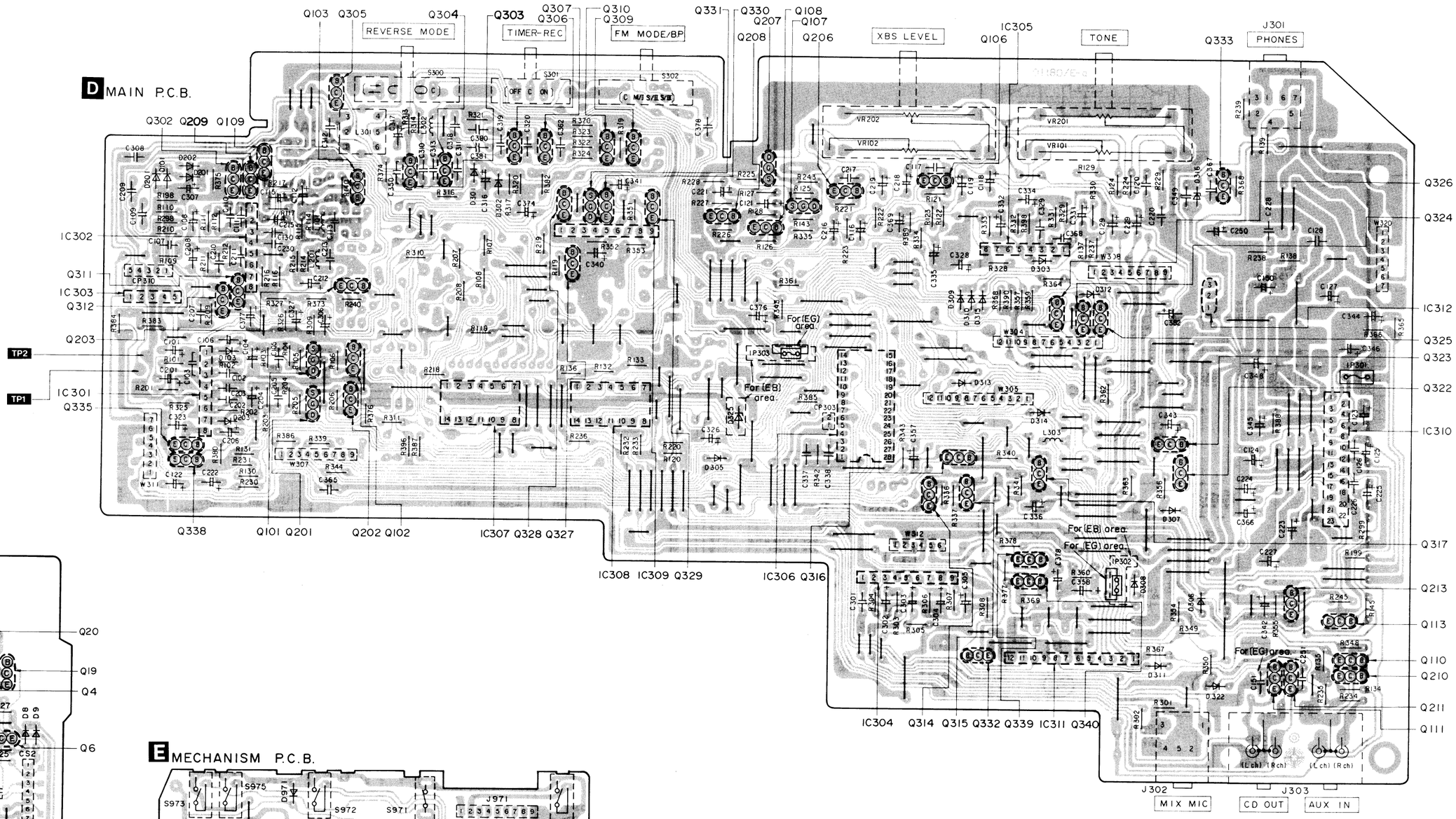


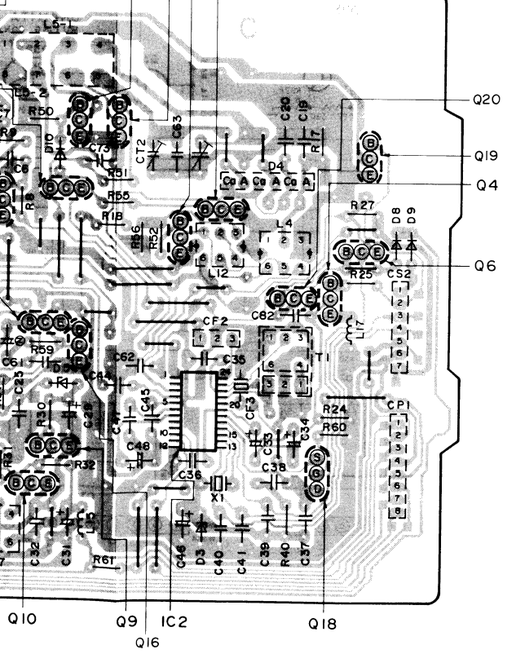
A TUNER P.C.B



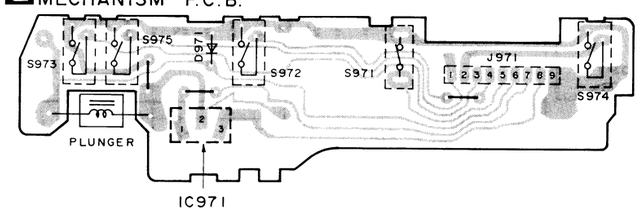
10 11 12 13 14 15 16 17 18 19

D MAIN P.C.B.

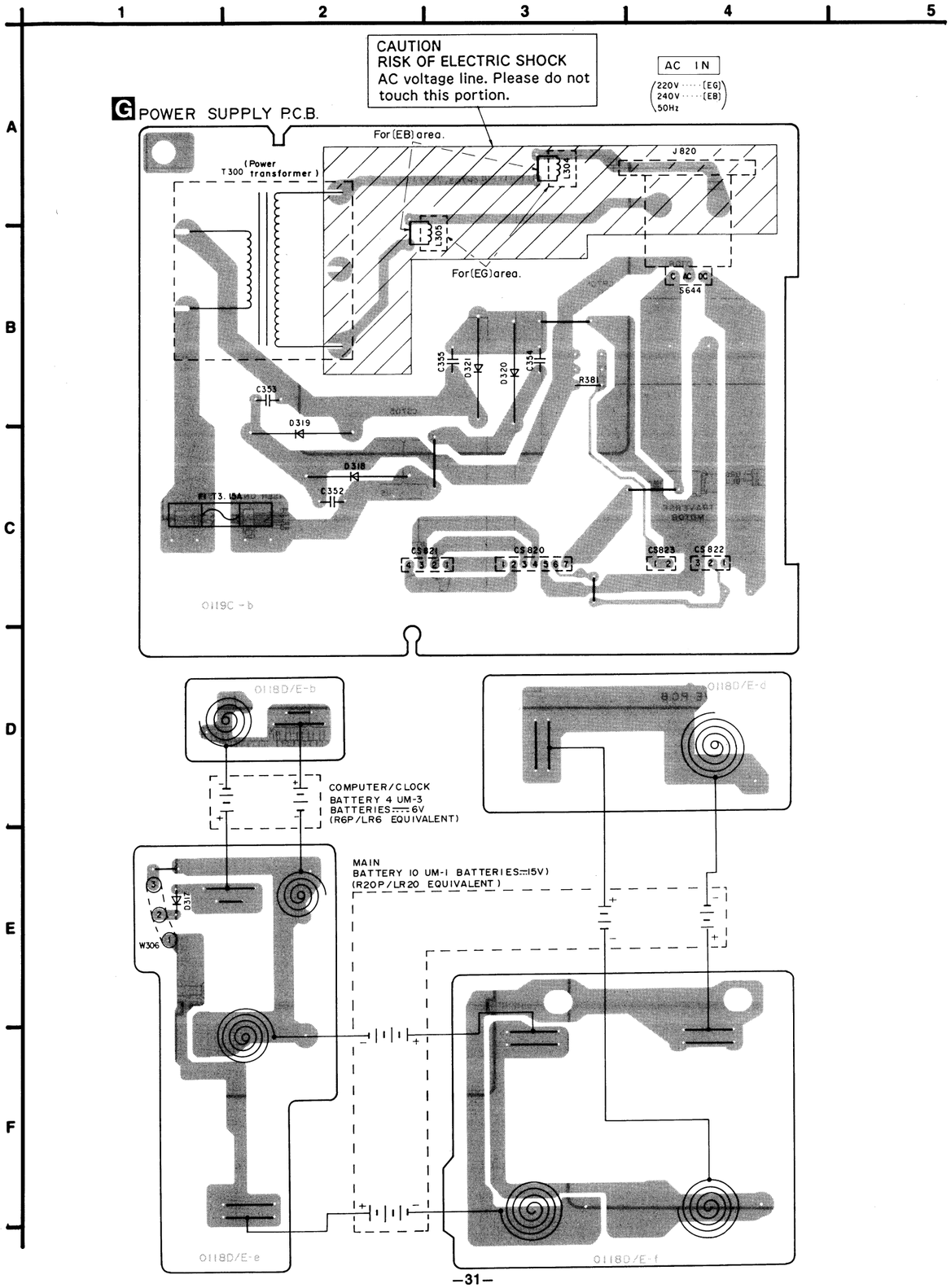




E MECHANISM P.C.B.



CIRCUIT BOARD DIAGRAM



AN8373SE2	42Pin	TA8132F	24Pin	
AN8374SE2	42Pin	UPD6372GSE2	16Pin	
LC3517BMLTP	24Pin			
RVITA7358FT	8 Pin			
SM5807ESET	16Pin			

LM7001	16Pin
MN4066B	14Pin
M50253P	16Pin
TA8410P	16Pin
TC9312-081	28Pin

BA15218N	8 Pin
BA3308M	9 Pin
BA6218	9 Pin
BA7755	5 Pin

AN8377N

AN7134

BA3920

DN6851A

LB1403N

MN6617

M50932-163FP

S8054HN-T
S81250HG

2SA1309STA
2SC3311ARTA
2SC3311RTA
2SC3312RTA
2SC3313BTA
UN4110TA
UN4111TA
UN4216TA
UN421FTA

RVTDTA114EST
RVTDTC114ECT
RVTDTA143XST

2SJ40CTA
2SK381CTA

2SB621RTA
2SC1674LTA
2SD1302STA

2SB1311Q

RVDKV1260A
RVDKV1330A2

RVDP300DLF

MA165TA
MA723TA

MA4100MTA
MA4130MTA

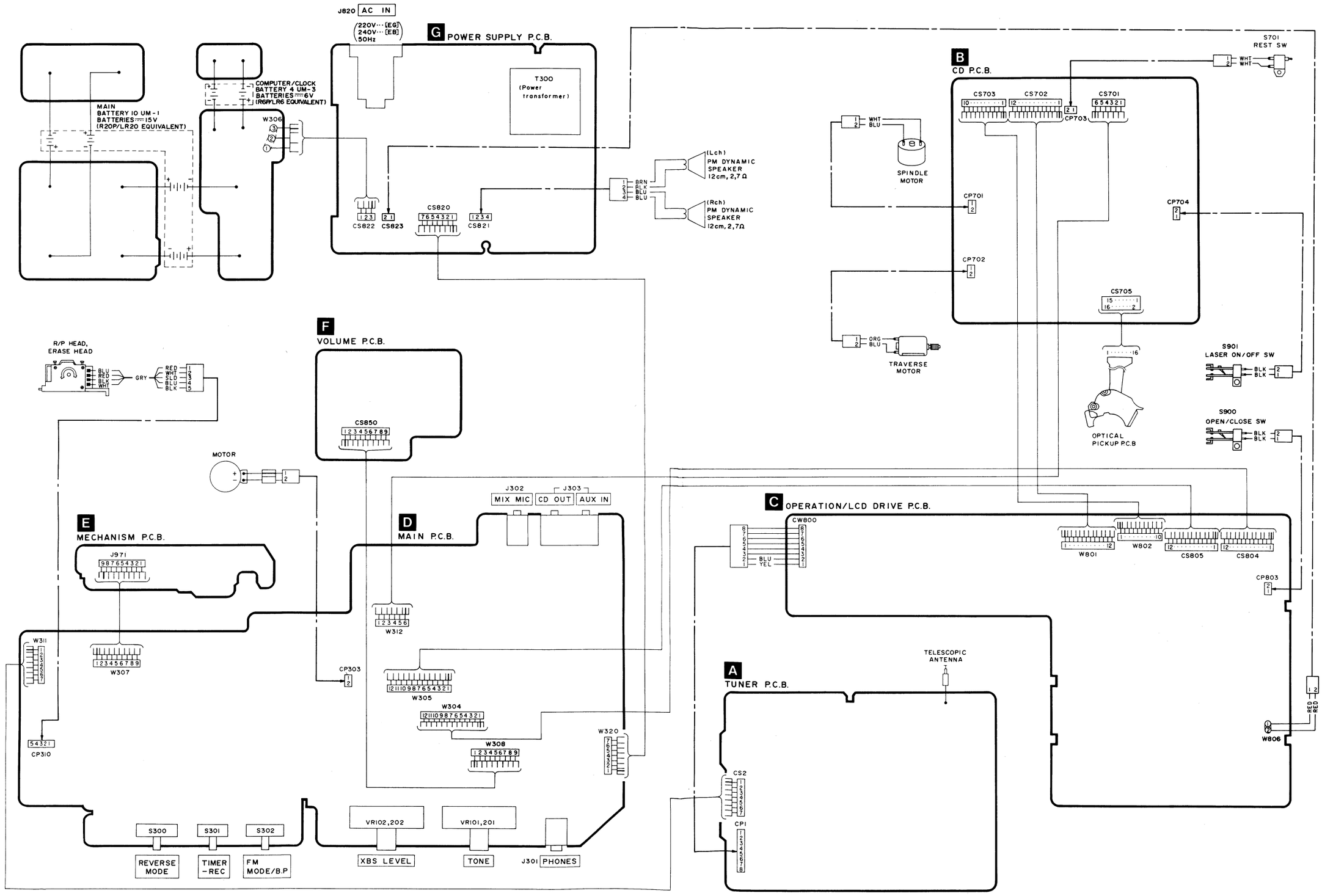
MA4047MTA
MA4051MTA

LN250RPXTA

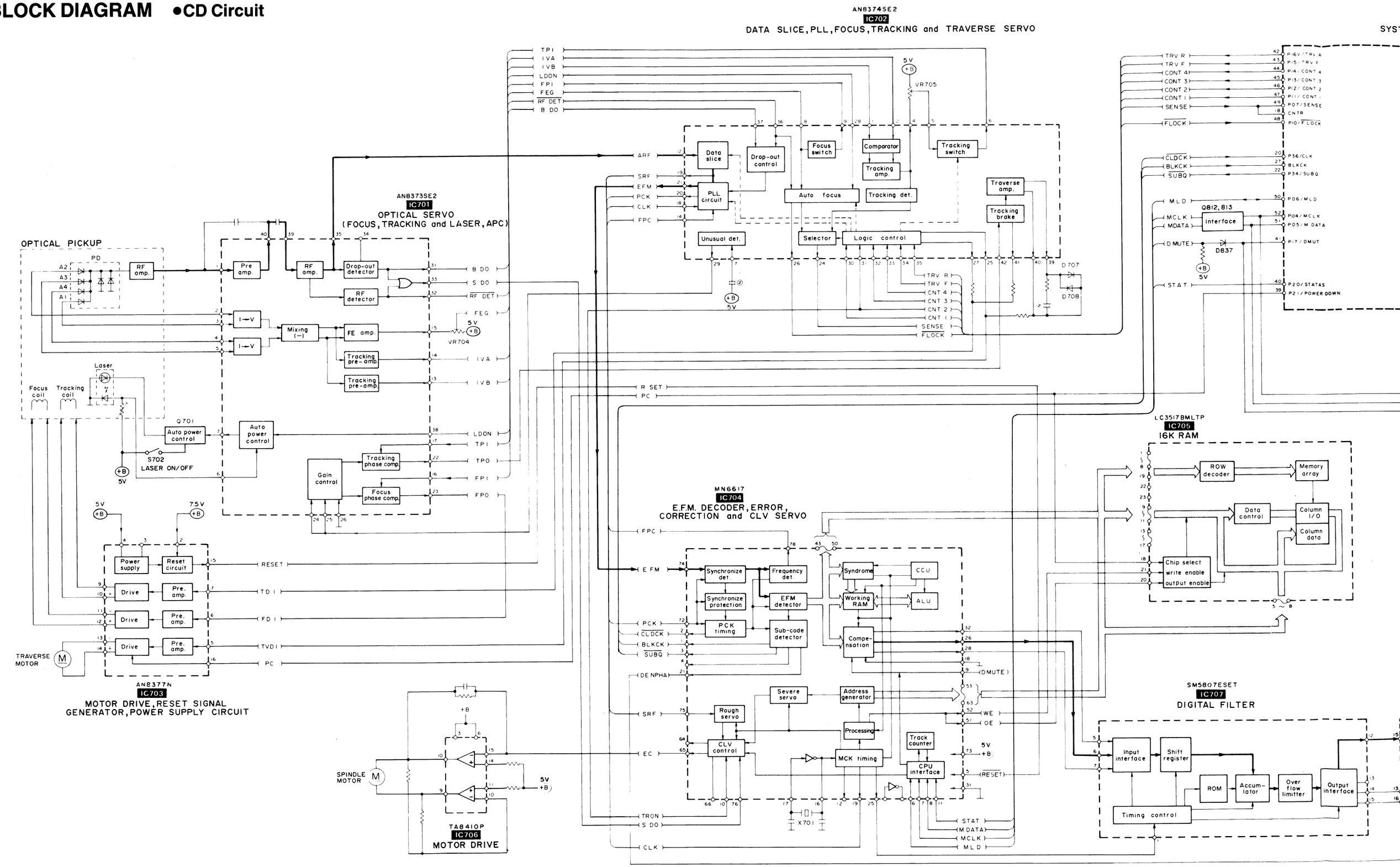
LN042474PH

LN051480PH

WIRING CONNECTION DIAGRAM



BLOCK DIAGRAM •CD Circuit



M50932-165FP
IC800
SYSTEM CONTROL/LCD DRIVE

Z801 (L C D)

Q803,804,819~823
S701,809,811~832,
S834~842,900

KEY MATRIX

Q800~802
Interface

Q814
Muting control

(CWB00)
CL
DI
CE

X800
X801

M50253P
IC802
LED DRIVE
(12-BIT SERIAL
/PARALLEL CONV.)

Input control
12-Bit shift register
Latch
Buffer

Q816
Switching

S301
ON
OFF

4.9V +B

D812 (CD)
D811 (TAPE)
D810 (TUNER/BAND)
D809 (AUX)

D850 (ATLS)

D833 D832 D834 D839 D842 D841

S803 S804 S805 S802 S801 S800

(CS805)
POWER CONT
AF MUTE
F. PLAY
REC "H"
D0
D1
D2

(CS804)
AUX "L"
CD "L"
TAPE "L"
TUNER "H"
MAR
D3

BA6218
IC803
MOTOR DRIVE

Logic
Pre. amp
Drive

5.4V +B

MOTOR
(VR862,863:
VOLUME CONTROL)

S8054HN-T
IC801
RESET SIGNAL GENERATOR

Compa-rator
Reference Voltage
Output circuit
Level converter

IC1
REMOTE CONTROL TRANSMITTER

Z800
Remote control receiver

Q807, Q808
Power supply

Q1
LED Drive

Modula-tion
Pulse generator
11-Bit latch
Chatterring simuldepression inhibit
Timming generation circuit
Key input control circuit

X1

BATT.3V

(W806)
AC BACKUP
AC BACKUP

Key switch

D851
(AC CONNECTION IND.)

UPD6372GSE2
IC708
D/A CONVERTER, BUFFER AMP

Memory array
Data control
Column I/O
Column data

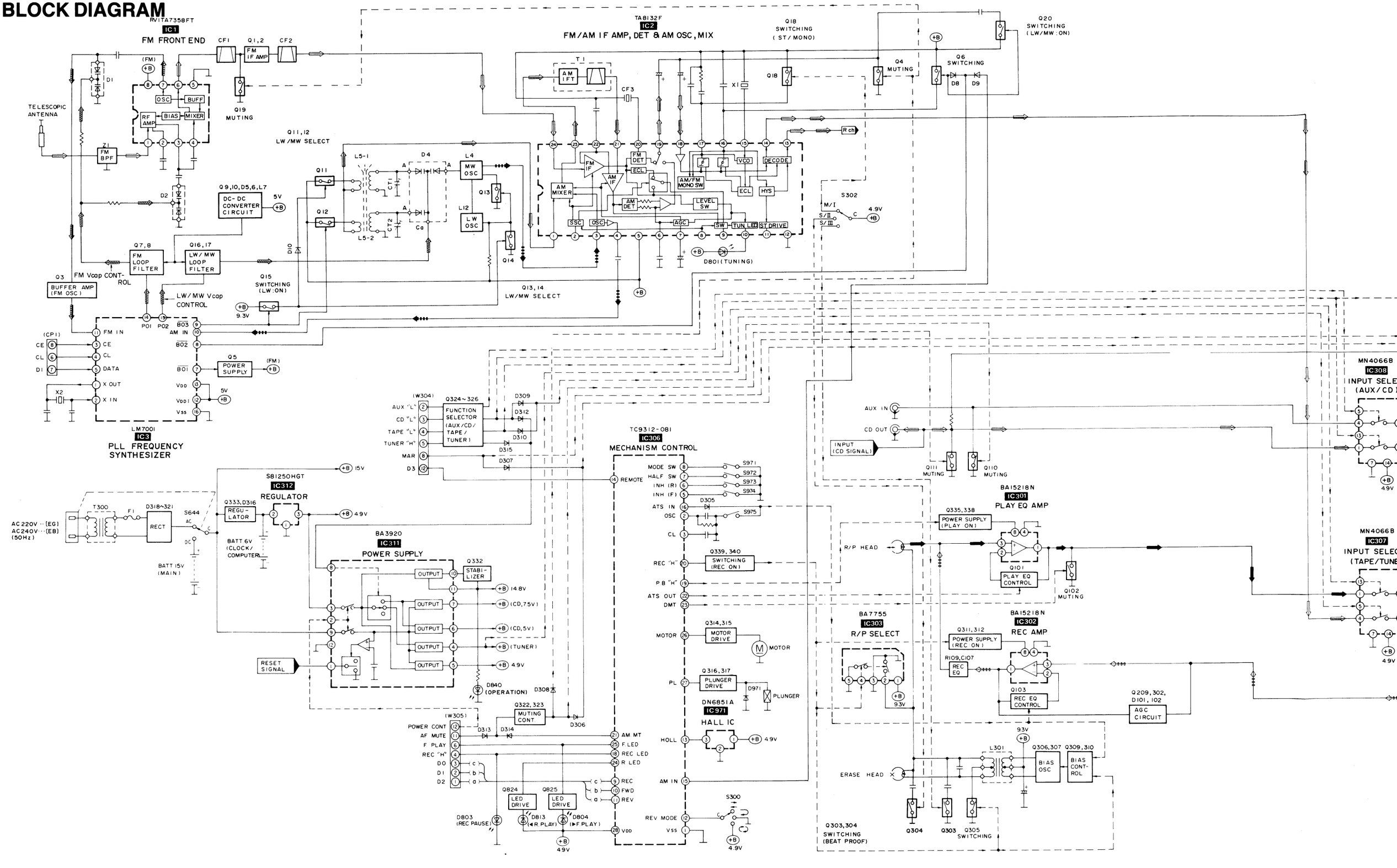
Accum-lator
Over flow limitter
Output interface
Input register
Selector
Timing control
Latch
PWM
Buff amp.

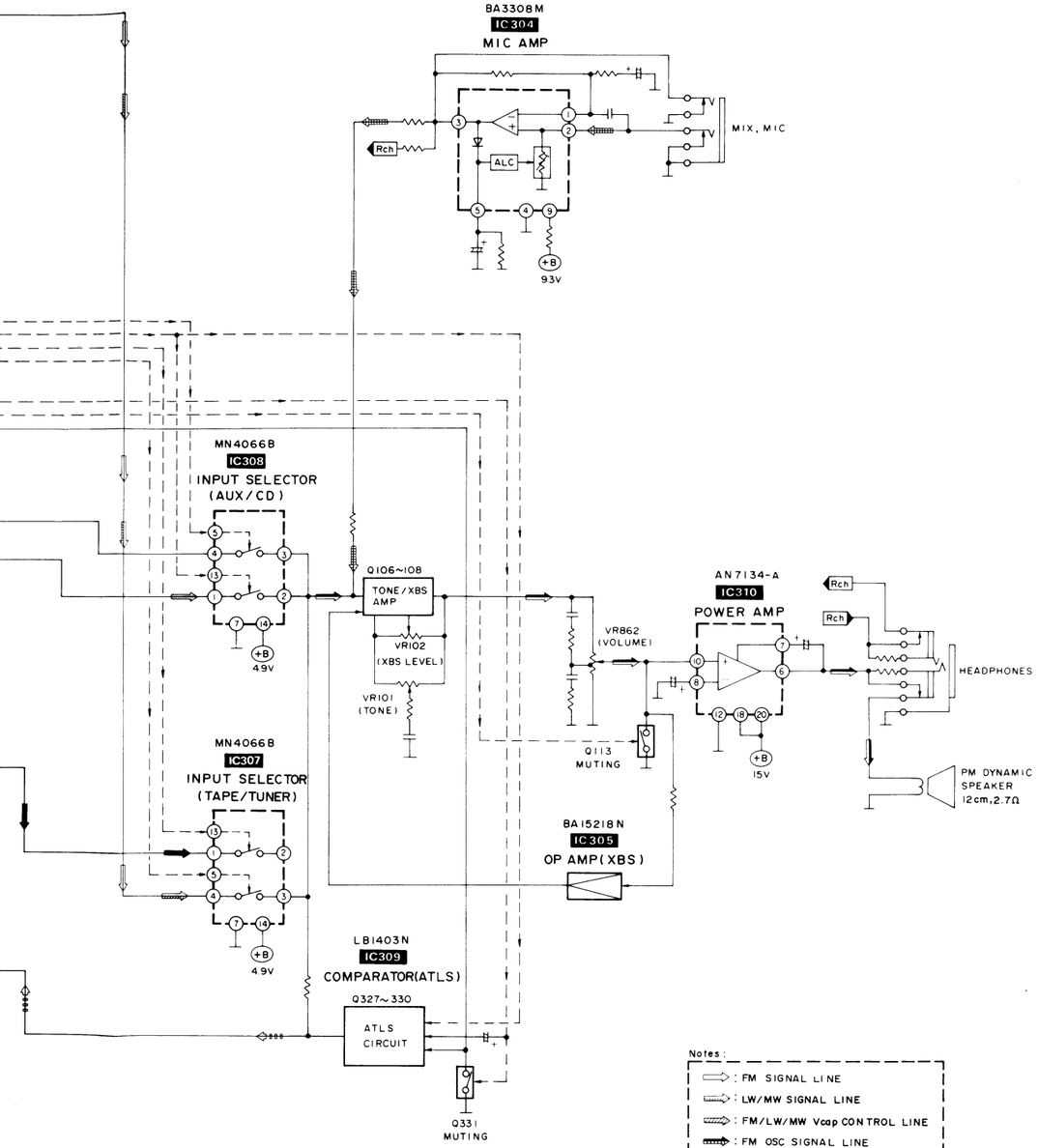
Q705 Switching (De-emphasis)
Q704 Switching (De-emphasis)
Q703 Switching control

7.5V +B
5V +B

(CS701)
L ch
GND
R ch
GND
+ B
+ B

BLOCK DIAGRAM





MEASUREMENTS AND ADJUSTMENTS

<TUNER SECTION>

■ ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT	
●Set power source voltage to 15 V DC. ●Set timer rec switch to OFF. ●Set power switch to ON. ●Set function switch to TUNER/MW or LW. ●Set volume control to maximum.	●Set tone control to center. ●Set XBS control to minimum. ●Output of signal generator should be no higher than necessary to obtain an output reading.

■ MW-RF ALIGNMENT

(The parts other than the ones listed below are aligned at the factory before they are supplied. Therefore, alignment of those parts is unnecessary when used for replacement.)

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Refer to Fig. 2.)	REMARKS
CONNECTIONS	FREQUENCY				
Fashion a loop of several turns of wire and radiate a signal into the loop ant. of receiver.	594 kHz	Tune to signal	Headphones Jack (32Ω) (Fabricate the plug as shown in Fig. 1 and then connect the lead wires of the plug to the measuring instrument.)	(*1) L5-1 (MW ANT Coil)	Adjust for maximum output. Adjust L5-1 by moving coil along the ferrite core.
〃	1,503 kHz	〃	〃	CT1 (AM ANT Trimmer)	Adjust for maximum output.
(*1) Fix antenna coil with wax after completing alignment.					

■ LW-RF ALIGNMENT

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Refer to Fig. 2.)	REMARKS
CONNECTIONS	FREQUENCY				
Fashion a loop of several turns of wire and radiate a signal into the loop ant. of receiver.	162 kHz	Tune to signal	Headphones Jack (32Ω) (Fabricate the plug as shown in Fig. 1 and then connect the lead wires of the plug to the measuring instrument.)	(*1) L5-2 (AM ANT Coil)	Adjust for maximum output. Adjust L5-2 by moving coil along the ferrite core.
〃	270 kHz	〃	〃	CT2 (AM ANT Trimmer)	Adjust for maximum output.
(*1) Fix antenna coil with wax after completing alignment.					

<CASSETTE DECK SECTION>

■ ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT	
●Set power source voltage to 15 V DC. ●Set timer rec switch to OFF. ●Set power switch to ON. ●Set function switch to TAPE. ●Set volume control to maximum.	●Set tone control to center. ●Set XBS control to minimum. ●Output of signal generator should be no higher than necessary to obtain an output reading.

■ HEAD AZIMUTH ALIGNMENT

TEST TAPE	INDICATOR ELECTRONIC VOLTMETER or OSCILLOSCOPE	ADJUSTMENT	SPECIFICATION	REMARKS
QZZCFM (8 kHz, −20 dB)	Headphones Jack (32Ω) (Fabricate the plug shown in Fig. 1 and then connect the lead wires of the plug to the measuring instrument.)	Azimuth Screw (Refer to Fig. 3.)	maximum output.	1. Playback mode. 2. Adjust for maximum output.

■ RECORD BIAS ALIGNMENT

TEST TAPE	INDICATOR ELECTRONIC VOLTMETER or OSCILLOSCOPE	ADJUSTMENT	SPECIFICATION	REMARKS
Use CrO_2 tape and Normal tape	TP1...(+) TP2...(−) (Refer to Fig. 5)	——	CrO_2...12±1 mV Normal...9±1 mV	•Record mode

■ TAPE SPEED ADJUSTMENT

TEST TAPE	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	SPECIFICATION	REMARKS
QZZCWAT (3 kHz)	Headphones Jack (32Ω) (Fabricate the plug shown in Fig. 1 and then connect the lead wires of the plug to the measuring instrument.)	Motor VR (Shown in Fig. 4.)	3000±90 Hz	1. Playback mode. 2. Adjust motor VR, for 3000±90 Hz reading on frequency counter.

■ ALIGNMENT POINT

•Please refer to Circuit Board and Wiring Connection Diagram for test point locations.

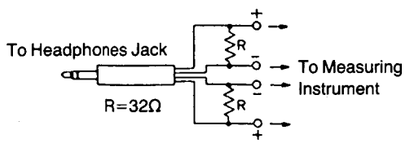


Fig. 1

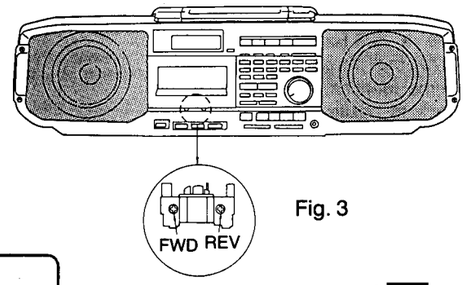


Fig. 3

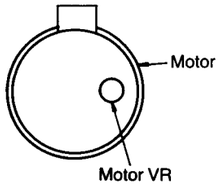


Fig. 4

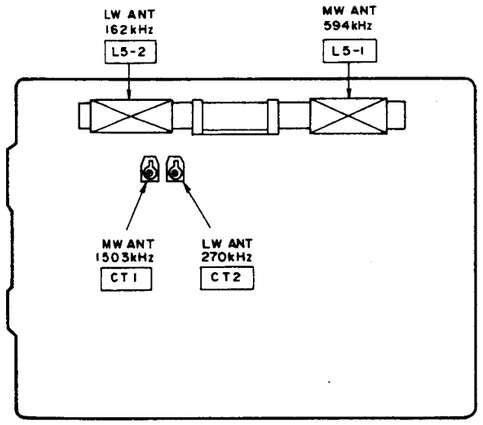
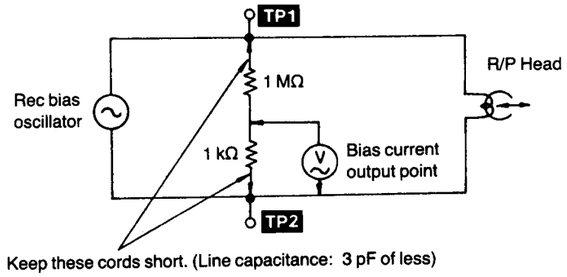


Fig. 2



Keep these cords short. (Line capacitance: 3 pF of less)

•In order not to influence the bias oscillation, divide the voltage with 1 MΩ and 1 kΩ resistors, and measure the voltage across the 1 kΩ resistor.

Fig. 5

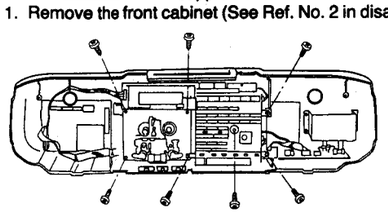
<CD SECTION>

Caution:

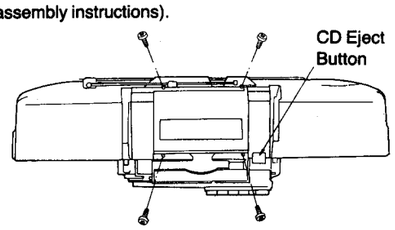
•It is very dangerous to look at or touch the laser beam. (Laser radiation is invisible.)
With the unit turned "on", laser radiation is emitted from the pickup lens.
Avoid exposure to the laser beam, especially when performing adjustments.

PREPARATION The alignment procedure below is subject to change to improve servicing. The changes are informed through supplements.

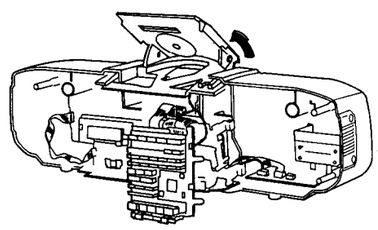
1. Remove the front cabinet (See Ref. No. 2 in disassembly instructions).



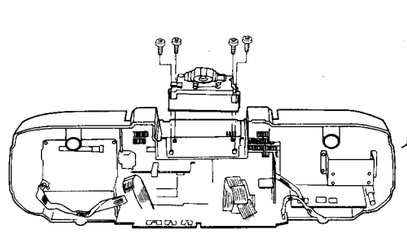
2. Remove 7 screws and then remove the switch P.C.B., mechanism and chassis.



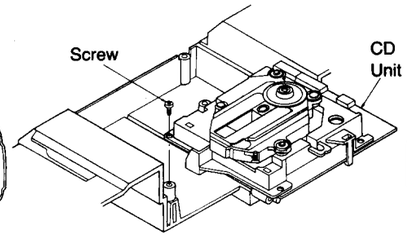
3. Press the CD eject button and then open the disc cover.
4. Remove 4 screws.



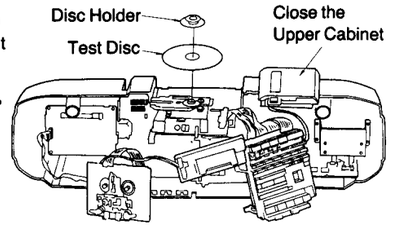
5. Remove the upper cabinet in the direction of arrow.



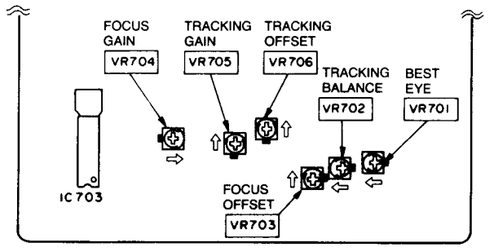
6. Remove 4 screws and remove the CD unit.



7. Assemble the CD unit.



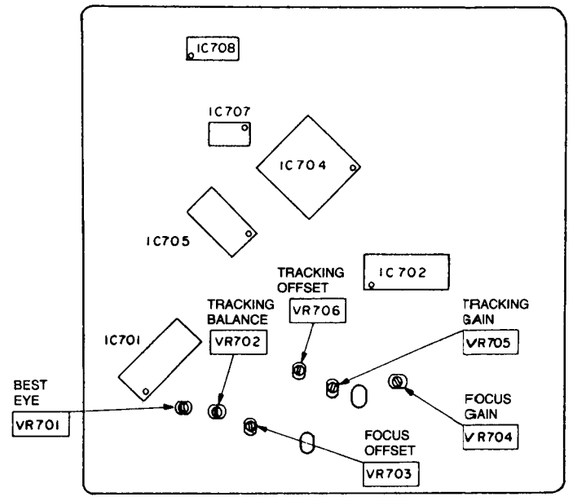
■ TEMPORARY SETTING OF EACH VR



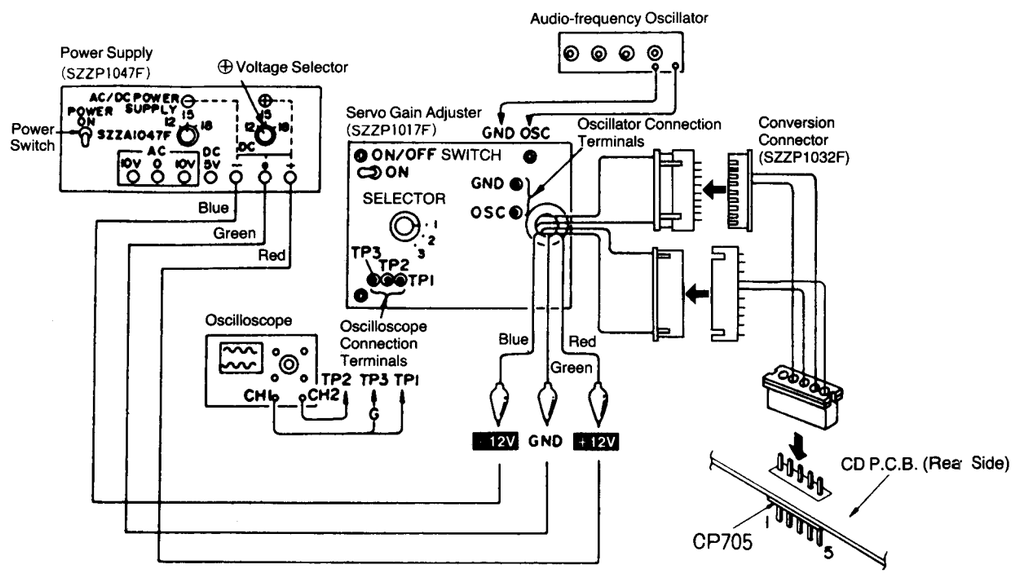
(Temporary VR setting if any of the trimmer VRs are replaced or require readjustment, temporarily set them to the following positions.

■ ALIGNMENT POINT

•Please refer to Circuit Board and Wiring Connection Diagram for test point locations.



■ CONNECTION OF SERVO GAIN ADJUSTER



Measuring Instruments and Special Tools

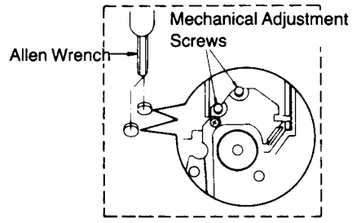
- Servo gain adjuster (SZZP1017F or SZZP1094C)
- Test discs
  1. Playability test disc (SZZP1054C or SZZP1014F)
  2. Uneven test disc (SZZP1056C)
  3. Black band test disc (SZZP1057C)
- Normal disc
- Dual-beam oscilloscope with bandwidth of 30 MHz or better (with EXT trigger and 1:1 probe).
- Audio frequency (AF) osillator
- Conversion connector (SZZP1032F)
- Allen wrench (M2.0)

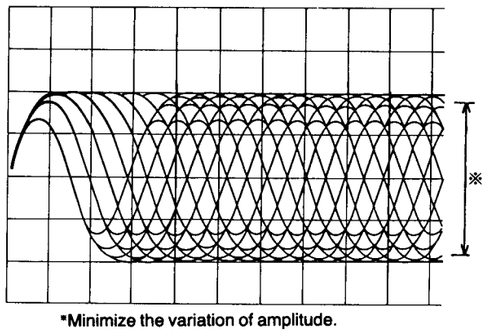
As to the replacement of the following parts, refer to the specified sections for adjustment.

- Optical pickup ..... Sections (1) to (8)

(1) MECHANICAL ADJUSTMENT

1. Connect the oscilloscope's CH. 1 probe across TJ101 (+) and TJ102 (−) on the Servo P.C.B.
   Oscilloscope setting:
   VOLT ..... 200 mV
   SWEEP ..... 0.2 µs.
   Input coupling ..... AC
2. Switch the player power **ON**, and play track **9** on the test disc (SZZP1056C).
3. Leave the player in Play mode and place it as shown in the figure on the right.
4. Alternately adjust the two mechanical adjusting screws with the 2.0 mm allen wrench until the RF signal amplitude variation on the oscilloscope is minimized.
5. After completing the adjustment, lock the **mechanical adjustments** with lock paint (RZZOL01).

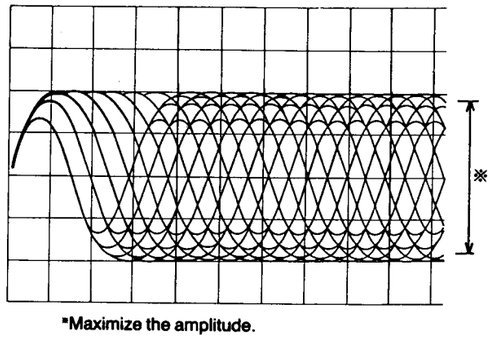




*Minimize the variation of amplitude.

(2) BEST EYE (PD BALANCE) ADJUSTMENT

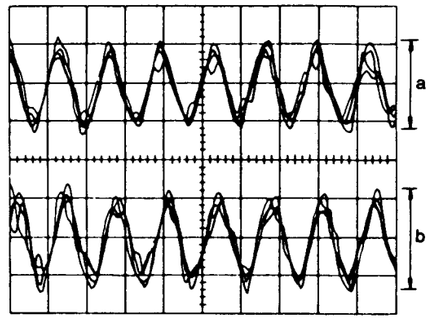
1. Connect the oscilloscope's CH. 1 probe across TP703 (+)and TP701 (−) on the Servo P.C.B.
   Oscilloscope setting:
   VOLT ..... 200 mV
   SWEEP ..... 0.2 µs.
   Input coupling ..... AC
2. Switch the player power **ON**, and play the 0.5 mm black dot on the test disc (SZZP1014F or SZZP1054C).
3. Adjust **VR701** until the RF signal eye pattern amplitude is maximized.



*Maximize the amplitude.

(3) FOCUS GAIN ADJUSTMENT

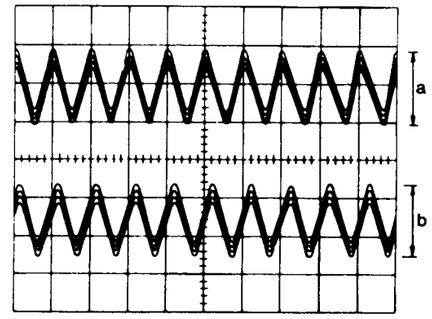
1. Connect the servo gain adjuster to the player (see page **19**).
2. Set the servo gain adjuster's gain switch to position **"2"** and the ON/OFF switch to **ON**.
3. Set up the AF oscillator output for **1 kHz**, **150 mVp-p**, and connect it across the OSC and GND terminals on the servo gain adjuster.
4. Connect oscilloscope's CH. 1 and CH. 2 probes to the servo gain adjuster's TP1 and TP2 terminals, respectively
   (TP3 is GND).
   Oscilloscope setting:
   VOLT ..... 50 mV (both channels)
   SWEEP ..... 1 msec.
   Input coupling ..... AC
5. Play the test disc (SZZP1014F or SZZP1054C).
6. Set the servo gain adjuster's gain switch to position **"3"**, and you will see a 825 Hz signal on the oscilloscope. Adjust **VR704** until the signal amplitudes on both channels become identical to each other.
7. Set the gain switch back to position **"2"**.



*Adjust **VR104** until a equals b.

(4) TRACKING GAIN ADJUSTMENT

1. Set up the AF oscillator output for **1 kHz**, 150 mVp-p, and connect it across the OSC and GND terminals on the servo gain adjuster.
2. Connect oscilloscope's CH. 1 and CH. 2 probes to the servo gain adjuster's TP1 and TP2 terminals, respectively
   (TP3 is GND).
   Oscilloscope setting:
   VOLT ..... 50 mV (both channels)
   SWEEP ..... 1 msec.
   Input coupling ..... AC
3. Switch the player power **ON**, and play the test disc (SZZP1014F or SZZP1054C).
4. Set the servo gain adjuster's gain switch to position **"1"**, and you will see a 1 kHz signal on the oscilloscope. Adjust **VR705** until the signal amplitudes on both channels become identical to each other.
5. Set the gain switch back to position **"2"**.

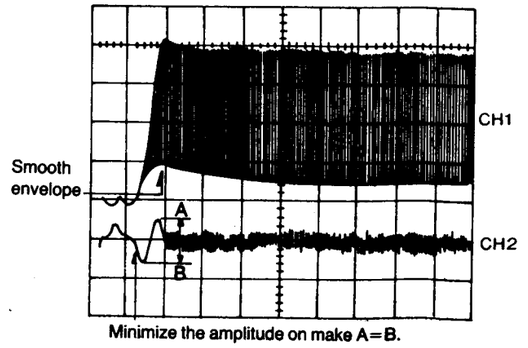


*Adjust **VR705** until a equals b.

(5) FOCUS OFFSET ADJUSTMENT

Note: Make sure that the servo gain adjuster's gain switch is set to position **"2"**.

1. Connect the oscilloscope's CH. 1 probe across TP703 (+) and TP701 (−) on the Servo P.C.B. and CH. 2 probe across TP705 (+) and TP701 (−).
   Oscilloscope setting:
   VOLT ..... 200 mV (CH. 1)
   1 V (CH. 2)
   SWEEP ..... 1 ms.
   Input coupling ..... AC (both CH. 1 and 2)
   Trigger mode ..... NORM (trigger CH. 1)
2. Switch the player power **ON**, and play the **9** on the test disc (SZZP1057C).
3. Trigger the oscilloscope's CH. 1 so that the following waveforms are observed. Adjust **VR703** until the dip in the RF signal envelope on CH. 1 is smooth and the signal amplitude on CH.2 is minimized, i.e. when amplitude A equals amplitude B.



Minimize the amplitude on make A=B.

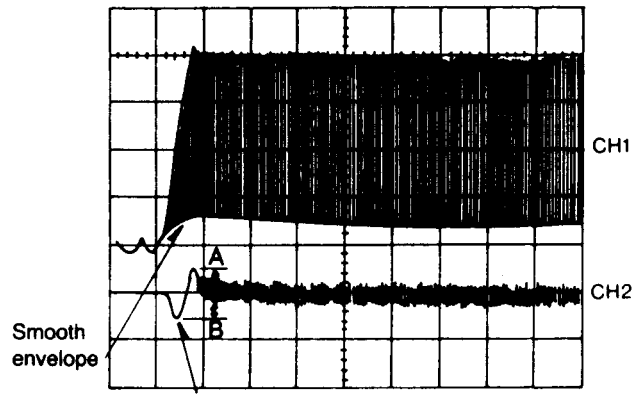
(6) TRACKING OF OFFSET ADJUSTMENT

Note: Make sure that the servo gain adjuster's gain switch is set to position **"2"**.

1. Connect the oscilloscope's CH. 1 probe across **TP703** (+) and **TP701** (−) on the Servo P.C.B. and CH. 2 probe across **TP704** (+) and **TP701** (−).

   Oscilloscope setting:

   VOLT ..... 200 mV (CH. 1)
   1 V (CH. 2)
   SWEEP ..... 0.5 ms.
   Input coupling ..... AC (both CH. 1 and 2)
   Trigger mode ..... NORM (trigger CH. 1.)
2. Switch the player power **ON**, and play rack **9** on the test disc (SZZP1057C).
3. Trigger the oscilloscope's CH. 1 so that the following waveforms are observed. Adjust **VR706** until the dip in the RF signal envelope on CH. 1 is smooth and the signal amplitude on CH. 2 is minimized, i.e. when amplitude A equals amplitude B.



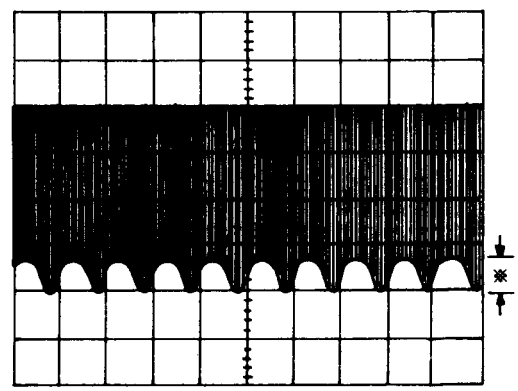
Minimize the amplitude on make A=B.

(7) TRACKING BALANCE ADJUSTMENT

1. Make sure that servo gain adjuster's gain switch is set to position **"2"**.
2. Set up the AF oscillator output for **1 kHz, 150 mVp-p**, and connect it across the OSC and GND terminals on the servo gain adjuster.
3. Connect oscilloscope's CH. 1 probe across **TP703** (+) and **TP701** (−) on the Servo P.C.B. and CH. 2 probe (+) to the OSC terminal on the servo gain adjuster.

   Oscilloscope setting:

   VOLT ..... 200 mV (CH. 1)
   SWEEP ..... 1 msec.
   Input coupling ..... AC (both CH. 1 and 2)
   Trigger mode ..... NORM (trigger CH. 2)
4. Switch the player power **ON**, and play the test disc (SZZP1014F or SZZP1054C).
5. Adjust the VR702 so that the section of the output of the waveform marked with ※ is balanced.
6. Disconnect the servo gain adjuster's leads from the player.



This section of the waveform must be balanced.

(8) CHECK OF PLAY OPERATION AFTER ADJUSTMENT

***Checking Skip Search**

1. Play an ordinary musical program disc.
2. Press the skip button to check for normal skip search operation (in both the forward and reverse directions).

***Checking Manual Search**

1. Play an ordinary musical program disc.
2. Press the manual search button to check for smooth manual search operations at either low or high speed (in both the forward and reverse directions).

***Checking Using Defect Disc**

1. Play the 0.7 mm black dot and the 0.7 mm wedge on the defect test disc (SZZP1054C) and verify that no sound skip or noise occurs.
2. Play the middle tracks of the uneven test disc and verify that no sound skip or noise occurs.

■ NEW SERVO GAIN ADJUSTER (Servo Amp. Adjusting Fixture)

The following introduces the improved version of the current servo gain adjuster (SZZP1017F):

Part number: SZZP1094C

Features:

(1) Contains all oscillation frequencies and output adjustments needed for focus servo gain, tracking servo gain, and tracking balance adjustment (requires no external oscillator).
(2) Panel indicators indicate the best points of focus and tracking servo gains (no oscilloscope needed).
(3) Internal power supply eliminates the need for power supply from the CD player.

FUNCTION OF IC TERMINALS

•IC306 (TC9312N-081): Mechanism Control

Terminal No.	Terminal Symbol	Terminal Name	Function
1	Vss	Ground Terminal	For ground connection.
2	OSC	External Oscillator C/R Terminal	This terminal enables the oscillation of the standard frequency. The standard frequency (C337 8200p, R342 33k) is 64 kHz.
3	CL	Resetting System Input Terminal	At power off, the IC is reset when a "LOW" level signal is input to this terminal.
4	NC	———	———
5	INH (F)	Input Terminal for Erroneous Erasure Prevention	Either an ON or OFF signal is input to this terminal from S973 to enable or inhibit erasure on the FWD side. At a "HI" level . . . . . FWD sound recording is not possible. (The circuit for erroneous erasure prevention is activated.) At a "LOW" level . . . . recording is possible.
6	INH (R)	Input Terminal for Erroneous Erasure Prevention	Either an ON or OFF signal is input to this terminal from S974 to enable or inhibit erasure on the REV side. At a "HI" level . . . . . REV sound recording is not possible. (The circuit for erroneous erasure prevention is activated.) At a "LOW" level . . . . recording is possible.
7	HALF SW	Input Terminal for Cassette Tape Insertion Detection	When a cassette tape has been inserted in Deck, S972 becomes active and a "LOW" level signal is input to this terminal to set the deck on standby.
8	MODE SW	Input Terminal for Detection of Operation on Deck	This is the detection terminal for operation on Deck. A "LOW" level signal is input to this terminal when S971 is turned on during PLAY, FF or RWD operation on Deck.
9	REC	Input Terminals for Tape Operation	When a tape operation button is pressed, a "LOW" level signal is input.
10	FWD		
11	REV		
12	REV MODE	Reverse Mode Input Terminal	The reverse mode switching signal is input to this terminal from S604. At a "LOW" level . . . . " ◢◤ " At "½ VDD" level . . . . " ⊂◤ " At "VDD" level . . . . . " ◤◢⊃ "
13	HOLE	Auto-Stop Detection Input Terminal	Tape rotation is detected by IC971 which outputs a signal into this terminal. No signal input . . . . . The unit is set to the STOP or AUTO REVERSE mode. Signal input (pulse) . . tape runs.
14	REMOTE	CD sync. input Terminal	CD sync. signal is input to this terminal from IC802.
15	AM IN	Muting Input Signal	Mute signal is input to this terminal.
16	ATS IN	Input Terminals for Auto Tape Selection	Auto tape select signal is input to this terminal from S975. At a "LOW" level . . . . NORMAL At a "HI" level . . . . . CrO_2
17	NC	———	———
18	REC LED	Rec LED Output Terminal	This terminal outputs a "HI" level when unit is in recording operation. The LED for D803 light up.
19	PB H	PB Output Terminal	This terminal outputs a "HI" level when unit is in playback operation.
20	REC H	REC Output Terminal	This terminal outputs a "HI" level when unit is in recording operation.
21	AM MT	Muting Output Terminal	This terminal outputs a "HI" level when unit is in muting operation.
22	ATS OUT	Auto Tape Select Output Terminal	This terminal outputs a auto tape select signal. At a "LOW" level . . . . CrO_2 At a "HI" level . . . . . NORMAL

Terminal No.	Terminal Symbol	Terminal Name	Function
23	DMT	Muting Output Terminal	This terminal outputs a "HI" level when unit is in muting operation.
24	R LED	Reverse LED Output Terminal	This terminal outputs a "HI" level signal when the unit is in reverse operation. The LED for D813 lights up.
25	F LED	Forward LED Output Terminal	This terminal outputs a "HI" level signal when the unit is in forward operation. The LED for D804 lights up.
26	MOTOR	Motor Control Signal Output Terminal	This terminal outputs the ON/OFF motor signal to Q315. At a "HI" level . . . . . the motor control system is activated. At a "LOW" level . . . . the motor control system is deactivated.
27	PL	ON/OFF Plunger Control Output Terminal	This terminal outputs the ON/OFF plunger control signal to Q317. At a "HI" level . . . . . the plunger operates. At a "LOW" level . . . . the plunger does not operate. After this terminal outputs a "HI" level signal and sets Q317 and 316 to ON, the plunger starts operating.
28	Vpp	Power Connection Terminal	To be connected to a +5.5 V power supply.

•IC701 (AN8373S): Servo amp.

Pin No.	MarK	I/O Division	Function
1	AMP1	I	RF signal input (×30 amp.)
2	PDAD	I	Photo detector current input (A2)
3	PDA	I	Photo detector current input (A1)
4	PDBD	I	Photo detector current input (A4)
5	PDB	I	Photo detector current input (A3)
6	LPD	I	Non-inverting laser power input
7	LD	O	Laser power auto control output
8	FBL1	I	PD balance adjustment
9	FBL2	I	
10	TBL1	I	Tracking balance adjustment
11	TBL2	I	
12	FOOFS	I	Focus offset adjustment
13	IVA	O	Current/voltage conversion output (A)
14	IVB	O	Current/voltage conversion output (B)
15	FE	O	Focus gain adjustment output
16	FPI	I	Focus error signal input
17	TPI	I	Tracking error signal input
18	C. TPL	I	Tracking error filter capacitor input
19	C. TPH		
20	C. FPL	I	Focus error filter capacitor input
21	C. FPH		
22	TPO	O	Tracking error signal output
23	FPO	O	Focus error signal output
24	FGC	I	Focus gain up signal input (Not used, connected to GND)
25	TGC	I	Tracking gain up signal input (Not used, connected to GND)
26	GD	I	Focus/tracking gain down signal input (Not used, connected to GND)
27	PTO	O	Position detecting amp. output
28	PTI	I	Position detecting amp. input
29	PBO	O	Position detecting buffer output
30	POT	I	Position detecting buffer input
31	BDO	O	Dropout detection output
32	$\overline{\text{RFDET}}$	O	RF detections signal output
33	SDO	O	Dropout detection pulse output
34	C. SBDO	I	Dropout detecting capacitor input
35	ARF	O	RF signal output
36	C AGC	I	AGC detecting capacitor input
37	VCC	I	Power supply (+5 V input)
38	LDON	I	Laser power control input
39	RF IN	I	RF signal input
40	AMPO	O	RF signal output
41	VREF	O	Reference voltage output
42	GND	I	Ground terminal

•IC702 (AN8374S): Servo processor

Pin No.	MarK	I/O Division	Function
1	LSA	I	Phase difference input (A)
2	LSB	I	Phase difference input (B)
3	TEOFS	I	Tracking offset adjustment
4	TE	O	Tracking gain adjustment
5	TEG	I	
6	TE OUT	O	Tracking error signal output
7	TE BPF	I	Tracking error gain detecting filter (Not used, open)
8	FEG	I	Focus gain adjustment
9	FE OUT	O	Focus error signal output
10	CLW	O	Triangular wave oscillator capacitor input
11	VREF	I	Reference voltage input
12	ARF	I	RF signal input
13	CDSL	I	Data slice filter capacitor input
14	FPC	I	Frequency difference signal input
15	GND	I	Ground terminal
16	C. PLL	I	PLL loop filter constant
17	VSS	I	Ground terminal
18	CLK	I	Frequency pull-in clock signal (88.2 kHz) input
19	SRF	O	Sliced and digitized RF signal output
20	PCK	O	Clock output extracted from SRF
21	EFM	O	EFM signal output synchronous with PCK
22	VDD	I	Power supply (+5 V input)
23	SPCNT	O	Track crossing speed control output (Not used, open)
24	SENSE	O	Selector output (track crossing state)
25	TRV	O	Traverse servo control output
26	$\overline{\text{FLOCK}}$	O	Focus lock signal output
27	KICK	O	Track kick signal output
28	LDON	O	Laser power control output
29	VDET	O	Focus/tracking gain up output (Not used, open)
30	CNT1	I	Control input (FOON: Focus servo ON signal)
31	CNT2	I	Control input (TRON: Tracking servo ON signal)
32	CNT3	I	Control input [KICKF: Kick direction (forward) command]
33	CNT4	I	Control input [KICKR: Kick direction (reverse) command]
34	TRVF	I	Traverse forward command signal
35	TRVR	I	Traverse backward command signal
36	$\overline{\text{RFDET}}$	I	RF detection signal input
37	BDO	I	Dropout detection input
38	VCC	I	Power supply (+5 V input)
39	TVPO	O	Traverse position detecting resistor/ capacitor inputs
40	TVPI	O	
41	BROUT	I	Tracking drive control output
42	BRIN	I	Tracking error signal input

•IC703 (AN8377): BTL drive

Pin No.	MarK	I/O Division	Function
1	PVCC	I	Driver power supply (+8.9 input)
2	VCC	I	Power supply (+8.9 V input)
3	TB	O	External transistor base driving output
4	VMON	O	Voltage output
5	TVDI	I	Traverse error signal input
6	FDI	I	Focus error signal input
7	TDI	I	Tracking error signal input
8	VREF	I	Reference voltage input
9	TD−	O	Inverting output of tracking driver
10	TD+	O	Non-inverting output of tracking driver
11	FD−	O	Inverting output of focus driver
12	FD+	O	Non-inverting output of focus driver
13	TVD−	O	Inverting output of traverse driver
14	TVD+	O	Non-inverting output of traverse driver
15	$\overline{\text{RESET}}$	O	Reset signal output
16	PC	I	PC input (connect to GND)

•IC704 (MN6617): Signal Process

Terminal No.	Terminal Symbol	I/O	Function
1	BLKCK	O	This terminal outputs a 75 Hz Clock signal of sub-code block (data Q).
2	CLDCK	O	This terminal outputs a 7.35 kHz clock signal of sub-code block (data Q).
3	SUBQ	O	This terminal outputs a signal of sub-code block (data Q).
4	CRC	——	——
5	RST	I	This is the terminal for resetting the system, e.g. when the unit is powered OFF, the circuit is reset by LOW level signals.
6	MLD	I	MCLK and MDAT signals are input to the terminal.
7	MCLK	I	This terminal receives 8 bit data reading clock signal.
8	MDATA	I	This IC receives a data signal input (8 bit) IC.
9	DMUTE	I	This terminal receives a "HI" level muting signal.
10	TRON	I	This terminal receives a tracking servo control signal. At a "LOW" level . . . . the tracking servo is ON.
11	STAT	O	This terminal outputs data signals (CRL, STOP).
12	SMCK	O	This terminal outputs a clock signal of 4.2336 MHz.
13	PMCK	——	——
14	ITC	I	This is the track counter input terminal, but it is not used in this unit. It is connected to a +5 V power supply.
15	TEST	——	This is the test mode selection input terminal, but it is not used in this unit. It is connected to a +5 V power supply.
16	X2	O	These are the clock transmission terminals (16.9344 MHz).
17	X1	I	
18	SEL	I	This is the data output selection input terminal. At a "HI" level . . . . . parallel data output. At a "LOW" level . . . . serial data output. *When connected, this unit is at a "HI" level.
19	LOG/WDCKS	——	——
20	RDG	——	——
21	DEMPH	O	This is the de-emphasis control output terminal. At a "HI" level . . . . . the de-emphasis control is set ON.
22	IPFLAG	——	——
23	FLAG0	——	——
24	FLAG6	——	——
25	XCK	O	This terminal outputs a clock signal of 16.93 MHz.
26	DA15	O	These terminals output L and R signals.
28	DA13		
31	GND	O	For ground connection.
32, 36	DA10	O	These terminals output L and R signals.
27	DA14	——	——
29	DA12		
30	DA11		
33~42	DA9~DA0		
43~50	D7~D0	I/O	These terminals output RAM data signals (16K).
51	RAMOE	O	This terminal outputs RAM OE control signals (16K).
52	RAMWE	O	This terminal outputs RAM WE control signals (16K).
53~63	RAMA0~ RAMA10	O	These terminals output RAM address signals (16K).
64	PC	——	——
65	EC	O	This is the spindle motor control output terminal. The spindle motor operates at a "LOW" level.
66	FG	——	——
67	VCNT	——	For ground connection.
68	REXT		
69, 73	VDD	I	To be connected to a +5 V power supply.
70	PD	——	——
71	PCKO		
72	PCK	I	This is the PLL extraction clock input terminal (f=4.2336 MHz).
74	EFM	I	This terminal receives EFM input signals (PLL).
75	SRF	I	This terminal receives EFM input signals (DSL).
76	DO	I	This terminal receives a drop-out input signal. At a "HI" level . . . . . drop-out comes into effect.
77	CLVS	——	——
78	FPC	O	This terminal outputs a frequency comparison signal.
79~83	——	——	——
84	SBCK	——	For ground connection.

•IC705 (LC3517BML): De Interleave

Pin No.	Mark	I/O Division	Function
1~8	A7~A0	I	Address input
9~11	D0~D2	I/O	Data in • out
12	VSS	——	Ground Connection
13~17	D3~D7	I/O	Data in • out
18	CS	——	Ground connection
19	A10	I	Address input
20	OE	I	Output-enable input
21	WE	I	Read-wright control input
22	A9	I	Address input
23	A8		
24	V_{DD}	I	Power supply

•IC707 (SM5807ES): Digital Filter

Pin No.	Mark	I/O Division	Function
1	XT	I	Clock input
2	XT	——	——
3	CKSL	——	——
4	CKO	——	——
5	LRCL	I	Clock (44.1 kHz)
6	DIN	I	Serial data input
7	BCKIN	I	Serial input, Bit clock input
8	V_{SS}	——	Ground
9	SCSL	I	SCSL=H: System clock=192 fs SCSL=L: System clock=196 fs
10	DGR	O	Degrich signal (Rch) (176.4 kHz)
11	DGL	O	Degrich signal (Lch) (176.4 kHz)
12	DOUT	O	Serial data output
13	WDCK	O	Output control clock (352.8 kHz)
14	LRCO	O	Output control clock (176.4 kHz)
15	BCKO	O	Serial output, Bit clock (8.467 MHz or 8.6436 MHz)
16	V_{SS}	——	+B

•IC708 (UPD6372GSE2): D/A Converter

Pin No.	Mark	I/O Division	Function
1	NC	——	——
2	D. GND	——	Ground (DC)
3	D. V_{DD}	I	+B (DC)
4	D. V_{DD}		
5	A. GND	——	Ground (AC)
6	R. OUT	O	AF signal output (Rch)
7	A. V_{DD}	I	+B (AC)
8	A. V_{DD}		
9	R. REF	I	Reference voltage input (Rch)
10	L. REF	I	Reference voltage input (Lch)
11	L. OUT	O	AF signal output (Lch)
12	A. GND	——	Ground (AC)
13	LRCK	I	Clock input
14	LRSEL	I	Ground
15	SI	I	Serial data input
16	CLK	I	Bit clock input

•IC800 (M50932-144FP): System Control

Pin No.	Mark	I/O Division	Function
1~9	SEG8~ SEG0	O	LCD segment signal output
10	COM3	——	——
11~13	COM2~ COM0	O	LCD common signal output
14~16	VL1~VL3	I	LCD drive power supply
17	V_{CC}	I	+B
18	CNTR	I/O	Counter signal
19	P37	I/O	Power control
20	P36	I/O	Clock
21	P35	——	——
22	P34	I/O	Sub-code (Q data)
23	P33	I/O	Auto mute
24	P32	I/O	Remote control
25	P31	I/O	Clock
26	P30		
27	BLKCK	I	Sub-code (Q data) clock input
28	NC	——	——
29	RESET	I	Reset signal input (Reset at Low)
30	XIN	I	Clock signal input
31	XOUT	O	Clock signal output
32	V_{SS}	——	Ground
33	P27	O	PLL control
34	P26		
35	P25		
36	P24	O	Input select
37	P23		
38	P22	——	——
39	P21	O	Power control output
40	P20	I	Status signal input
41	P17	O	AF mute signal output
42	P16	O	Traverse "Reverse" command signal output
43	P15	O	Traverse "Forward" command signal output
44	P14	O	Optical servo IC control signal [Kick direction (Reverse) control]
45	P13	O	Optical servo IC control signal [Kick direction (forward) control]
46	P12	O	Optical servo IC control signal (Tracking servo)
47	P11	O	Optical servo IC control signal (Focus servo)
48	P10	I	Focus clock signal input
49	P07	I	Selector input
50	P06	O	Data road signal
51~56	P05~P00	I	Key matrix
57~64	P47~P40	I	Key matrix
65~80	SEG23~ SEG9	O	LCD drive signal output

■ REPLACEMENT PARTS LIST

Notes : • Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
• The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
Parts without these indications can be used for all areas.
• Remote Control Ass'y:
Supply period for three years from termination of production.

Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)	
IC1	RVITA7358FT	I. C, FM FRONT END	
IC2	TA8132F	I. C, FM/AM IF AMP	
IC3	LM7001	I. C, PLL FREQUENCY	
IC301, 302	BA15218N	I. C, PLAY EQ REC AMP	
IC303	BA7755	I. C, R/P SELECT	
IC304	BA3308M	I. C, MIC AMP	
IC305	BA15218N	I. C, XBS AMP	
IC306	TC9312-081	I. C, MECHANISM CONTROL	
IC307, 308	MN4066B	I. C, INPUT SELECT	
IC309	LB1403N	I. C, COMPARATOR	
IC310	AN7134-A	I. C, POWER AMP	
IC311	BA3920	I. C, POWER SUPPLY	
IC312	S81250HGT	I. C, REGULATOR	
IC701	AN8373SE2	I. C, SERVO	
IC702	AN8374SE2	I. C, SERVO	
IC703	AN8377N	I. C, 3CH DRIVER	
IC704	MN6617	I. C, SIGNAL PROCESS	
IC705	LC3517BMLTP	I. C, S RAM	
IC706	TA8410P	I. C, BTL DRIVER	
IC707	SM5807ESET	I. C, DIGITAL FILTER	
IC708	UPD6372GSE2	I. C, D/A CONVERTER	
IC800	M50932-165FP	I. C, SYSTEM CONTROL	
IC801	S8054HN-T	I. C, RESET SIGNAL	
IC802	M50253P	I. C, LED DRIVE	
IC803	BA6218	I. C, HALL	
IC971	DN6851A	I. C, HALL	
		TRANSISTOR(S)	
Q1, 2	2SC3313BTA	TRANSISTOR	
Q3	2SC1674LTA	TRANSISTOR	
Q4	2SC3311RTA	TRANSISTOR	
Q5, 6	RVTDTA143XST	TRANSISTOR	
Q7-9	2SC3311RTA	TRANSISTOR	
Q10	2SC3311RTA	TRANSISTOR	
Q11, 12	2SA1309RTA	TRANSISTOR	
Q13, 14	2SC3311RTA	TRANSISTOR	
Q15	RVTDTA143XST	TRANSISTOR	
Q16, 17	2SC3311RTA	TRANSISTOR	
Q18	2SK381CTA	TRANSISTOR	
Q19	RVTDTC114TST	TRANSISTOR	
Q20	RVTDTA143XST	TRANSISTOR	
Q101	2SJ40CTA	TRANSISTOR	

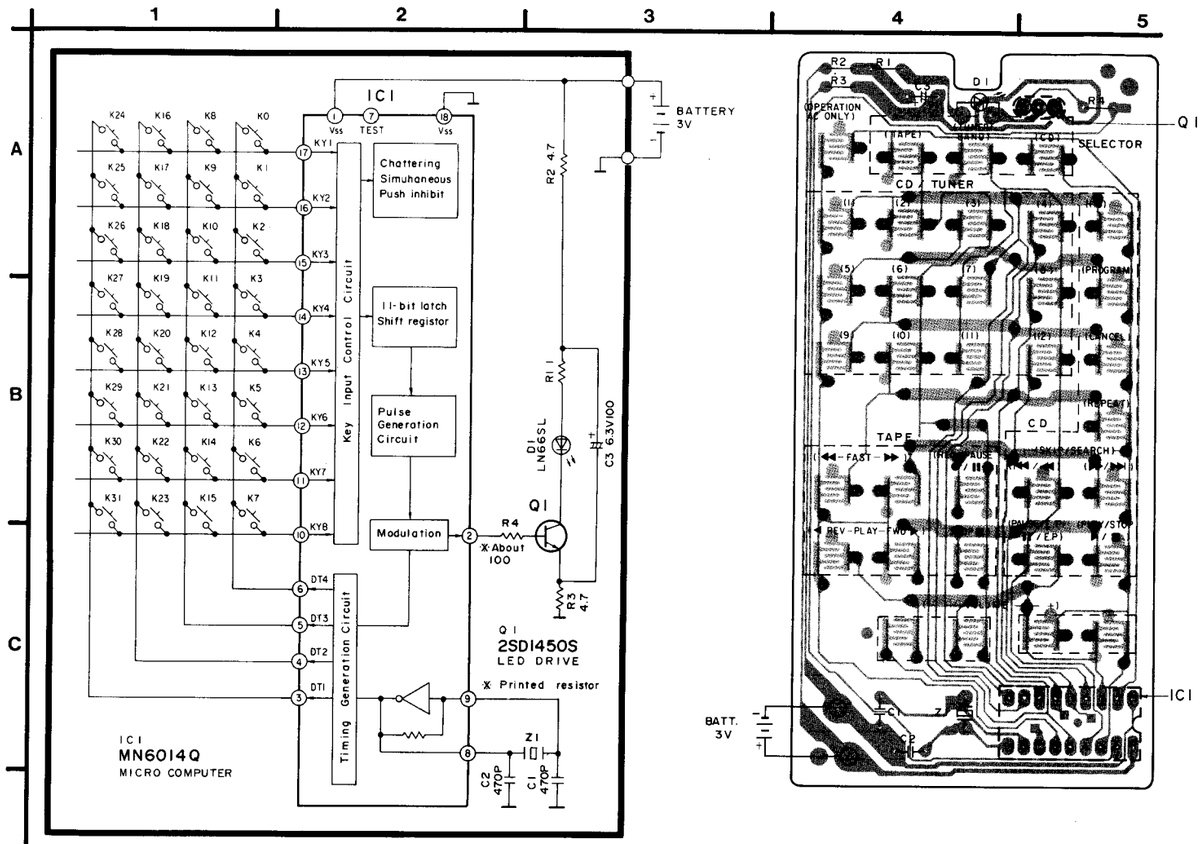
Ref. No.	Part No.	Part Name & Description	Remarks
Q102	2SD1302STA	TRANSISTOR	
Q103	RVTDTC143TST	TRANSISTOR	
Q106	2SC3312RTA	TRANSISTOR	
Q107	2SK381CTA	TRANSISTOR	
Q108	2SC3312RTA	TRANSISTOR	
Q109-111	2SC3311ARTA	TRANSISTOR	
Q113	2SC3311ARTA	TRANSISTOR	
Q201	2SJ40CTA	TRANSISTOR	
Q202	2SD1302STA	TRANSISTOR	
Q203	RVTDTC143TST	TRANSISTOR	
Q206	2SC3312RTA	TRANSISTOR	
Q207	2SK381CTA	TRANSISTOR	
Q208	2SC3312RTA	TRANSISTOR	
Q209-211	2SC3311ARTA	TRANSISTOR	
Q213	2SC3311ARTA	TRANSISTOR	
Q302-304	2SC3311ARTA	TRANSISTOR	
Q305-307	2SD1302STA	TRANSISTOR	
Q309	RVTDTC143TST	TRANSISTOR	
Q310	2SC3311ARTA	TRANSISTOR	
Q311	RVTDTA143XST	TRANSISTOR	
Q312	2SC3311ARTA	TRANSISTOR	
Q314	2SB621RTA	TRANSISTOR	
Q315	RVTDTC143XST	TRANSISTOR	
Q316	2SB621RTA	TRANSISTOR	
Q317	RVTDTC143XST	TRANSISTOR	
Q322	UN4111TA	TRANSISTOR	
Q323	RVTDTC143XST	TRANSISTOR	
Q324-326	UN4111TA	TRANSISTOR	
Q327, 328	RVTDTC143XST	TRANSISTOR	
Q329	UN4111TA	TRANSISTOR	
Q330	RVTDTC143XST	TRANSISTOR	
Q331	2SJ40CTA	TRANSISTOR	
Q332	2SB1393QVE	TRANSISTOR	
Q333	2SC3311ARTA	TRANSISTOR	
Q335	RVTDTA143XST	TRANSISTOR	
Q338	2SC3311ARTA	TRANSISTOR	
Q339	RVTDTC143XST	TRANSISTOR	
Q340	RVTDTA114TST	TRANSISTOR	
Q701	2SA1309STA	TRANSISTOR	
Q703	UN4110TA	TRANSISTOR	
Q704, 705	UN4216TA	TRANSISTOR	
Q800-802	RVTDTA114TST	TRANSISTOR	
Q803	2SC3311RTA	TRANSISTOR	
Q804	RVTDTC114TST	TRANSISTOR	
Q807	RVTDTA114EST	TRANSISTOR	
Q808	RVTDTC114EST	TRANSISTOR	

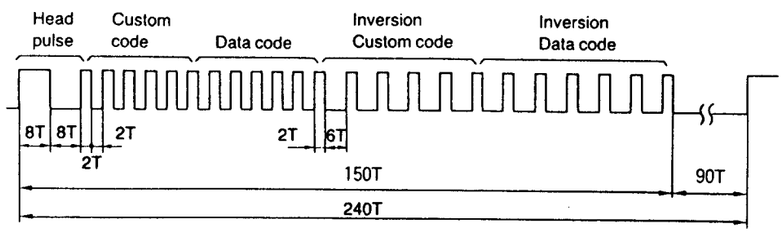
Ref. No.	Part No.	Part Name & Description	Remarks
Q812, 813	RVTDTC114TST	TRANSISTOR	
Q814	RVTDTC114EST	TRANSISTOR	
Q816	RVTDTA114EST	TRANSISTOR	
Q819	2SC3311RTA	TRANSISTOR	
Q820, 821	RVTDTC114TST	TRANSISTOR	
Q822	2SC3311RTA	TRANSISTOR	
Q823	RVTDTC114TST	TRANSISTOR	
Q824	2SC3311RTA	TRANSISTOR	
Q825	UN421FTA	TRANSISTOR	
		DIODE(S)	
D1, 2	1SV147T4MATU	DIODE	
D3	MA4051MTA	DIODE	
D4	RVDKV1235ZB	DIODE	
D5	MA4130MTA	DIODE	
D6	MA165TA	DIODE	
D8, 9	MA165TA	DIODE	
D10	MA165TA	DIODE	
D101-103	MA165TA	DIODE	
D201-203	MA165TA	DIODE	
D301	MA165TA	DIODE	
D302	MA4047MTA	DIODE	
D303	MA165TA	DIODE	
D305-315	MA165TA	DIODE	
D316	MA4100MTA	DIODE	
D317	MA723TA	DIODE	
D318-321	RVDP300DLF	DIODE	
D322	MA165TA	DIODE	
D325	MA4068MTY	DIODE	(EB)
D707, 708	MA165TA	DIODE	
D801	LN250RPXTA	DIODE	
D802	MA165TA	DIODE	
D803, 804	LN042474PH	DIODE	
D809-812	LN061480PH	DIODE	
D813	LN042474PH	DIODE	
D814-818	MA165TA	DIODE	
D820-823	MA165TA	DIODE	
D825-839	MA165TA	DIODE	
D840	LN061480PH	DIODE	
D841-843	MA165TA	DIODE	
D845-847	MA165TA	DIODE	
D850	LN042474PH	DIODE	
D851	LN061480PH	DIODE	
D971	RVD1SS133TA	DIODE	
		VARIABLE RESISTOR(S)	
VR101, 201	RRV20F01G54A	V. R, TONE	
VR102, 202	RRV20B02G54A	V. R, XBS	
VR701	EVNDXAA00B14	V. R, BEST EYE ADJ.	
VR702	EVNDXAA00B24	V. R, TRACKING BALANCE	

Ref. No.	Part No.	Part Name & Description	Remarks
VR703-706	EVNDXAA00B14	V. R, FOCUS OFFSET etc.	
VR862, 863	EWC07A027B54	V. R, VOLUME	
		COMPONENT COMBINATION(S)	
Z1	RXABPWB6AT	COMPONENT COMBINATION	
Z800	A1QH3029H0	REMOTE SENSOR	
Z801	LD-BU9412AZ	LCD	
		COIL(S)	
L3	RLQZP4R7KT-Y	COIL	
L4	RL02B001-T	COIL	
L5	RLV6C001-0	COIL	
L7	RL09B18-M	COIL	
L8, 9	RLQZP221KT-Y	COIL	
L12	RL01B001-T	COIL	
L15	RLQZP221KT-Y	COIL	
L17	RLQZP4R7KT-Y	COIL	
L101	RLQZB822KT-D	COIL	
L201	RLQZB822KT-D	COIL	
L301	RL08C7-T	COIL	
L302, 303	RLQZB470KT-D	COIL	
L304, 305	RLQZR470KT-Y	COIL	⚠(EG)
L804	RLQZP2R2KT-Y	COIL	
L806-809	RLQZP2R2KT-Y	COIL	
		TRANSFORMER(S)	
T1	RLI2B001-T	TRANSFORMER	
T300	RTP1U1E001-C	POWER TRANSFORMER	⚠
		FILTER(S)	
CF1, 2	RLFFETWLA02D	CERAMIC FILTER	
CF3	RLFDFTA01D	CERAMIC FILTER	
		OSCILLATOR(S)	
X1	RSXZ456KM01	X'TAL OSCILLATOR	
X2	RVCF7200NZN	X'TAL OSCILLATOR	
X701	RSXZ16M9M01T	X'TAL OSCILLATOR	
X800	RSXD32K7F01	X'TAL OSCILLATOR	
X801	RVBCSA4R0MGT	X'TAL OSCILLATOR	
		FUSE(S)	
F1	XBA2C31TB0U	FUSE 250V T3.15 A	⚠
		SWITCH(ES)	
S300	RSS3A002-H	SW, REVERSE	

SCHEMATIC DIAGRAM AND CIRCUIT BOARD DIAGRAM

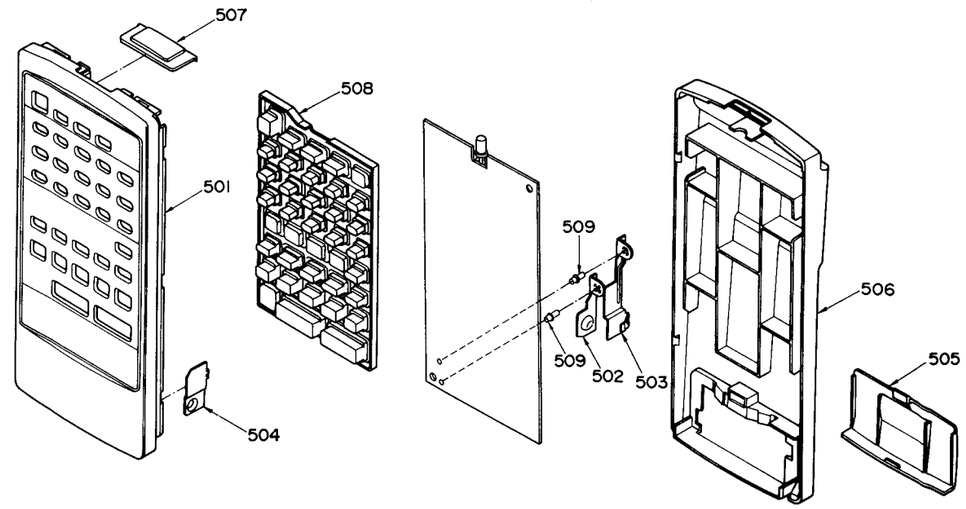
•for Remote Control





Key No.	Function	Key No.	Function	Key No.	Function	Key No.	Function
K0	POWER	K8	TAPE	K16	TUNER	K24	CD
K1	◀ PLAY (REW)	K9	VOLUME (−)	K17	❚❚ PAUSE	K25	VOLUME (+)
K2	▶ PLAY (FWD)	K10	■ STOP	K18	⏮/◀◀	K26	▶/■
K3	▶▶ FF/TIPS	K11	● ❚❚ REC PAUSE	K19	12	K27	▶▶/⏭
K4	◀◀ REW/TPS	K12	10	K20	8	K28	REPEAT
K5	9	K13	6	K21	4	K29	CANCEL
K6	5	K14	3	K22	11	K30	PROGRAM
K7	1	K15	2	K23	7	K31	+10

CABINET PARTS LOCATION •for Remote Control



Ref. No.	Part No.	Part Name & Description	Remarks
		REMOTE CONTROL TRANSMITTER	
IC1	MN6014Q	I.C, CONTROL SIGNAL	
Q1	2SD1450RSTTA	TRANSISTOR	
D1	LN66SLTA	L.E.D.	
Z1	EF0A420K16BA	OSCILLATOR	
R1	ERDS2TJ1R0T	C. RESISTOR 1/4W 1.0	
R2	ERDS2TJ4R7T	C. RESISTOR 1/4W 4.7	
R3	ERDS2TJ4R7T	C. RESISTOR 1/4W 4.7	
R4	ERDS2TJ101T	C. RESISTOR 1/4W 100	
C1	ECBT1H471KB5	C. CAPACITOR 50V 470P	
C2	ECBT1H471KB5	C. CAPACITOR 50V 470P	
C3	ECEA0JKS101B	E. CAPACITOR 6.3V 100U	
501	RFKGDS30EG-K	UPPER CABINET ASS'Y	
502	RJC40001	BATTERY TERMINAL (+)	
503	RJC80001	BATTERY TERMINAL (-)	
504	RJC94001	BATTERY TERMINAL (+--)	
505	RKKD008	BATTERY COVER	
506	RFKHDS30EG-K	LOWER CABINET ASS'Y	
507	RKW0033	SMOKE PLATE	
508	RMG0047	RUBBER SWITCH	
509	RJR0017	RIVET	

Ref. No.	Part No.	Part Name & Description	Remarks
S301	RSS2A004-H	SW, TIMER REC	
S302	RSS3B45ZA-H	SW, FM MODE	
S701	SSHD5-E	SW, CD RESET	
S800-805	EVQ11405K	SW, OPERATION (DECK)	
S809	EVQ11405K	SW, TUNER/BAND	
S811-832	EVQ11405K	SW, OPERATION (CD etc.)	
S834-842	EVQ11405K	SW, CD/TUNER	
S900, 901	RSH1A67ZA-U	SW, CD OPEN/CLOSE	
S971	RSH1A89ZA-U	SW, MODE	
S972-975	RSH1A90ZA-U	SW, HALF/TAPE etc.	
		TRIMMER CAPACITOR(S)	
CT1	RCV10AF1T-S	TRIMMER CAPACITOR	
CT2	ECRLA020E53R	VARIABLE CAPACITOR	

Ref. No.	Part No.	Part Name & Description	Remarks
		I. C, PROTECTOR(S)	
IP301	RAHICPN10TA	I. C. PROTECTOR	
IP302	RAHICPN5TA	I. C, PROTECTOR	(EB)
IP303	RAHICPN5TA	I. C, PROTECTOR	(EB)
		JACK(S)	
J301	RJJD7S2ZA-C	JACK, HEADPHONES	
J302	RJJ1D25ZA-C	JACK, MIX MIC	
J303	SJF3057N	JACK, CD OUT/AUX IN	
J820	RJJ1SE01-H	JACK, AC IN (S644)	⚠

Notes : * Capacity valuse are in microfarads (uF) unless specified otherwise, P=Pico-farads(pF) F=Farads(F)
* Resistance values are in ohms, unless specified otherwise, 1K=1,000(OHM) , 1M=1,000k(OHM)

Ref. No.	Part No.	Values & Remarks
		RESISTORS
R1-3	ERDS2TJ104T	1/4W 100K
R4	ERDS2TJ470T	1/4W 47
R5	ERDS2TJ151T	1/4W 150
R6	ERDS2TJ331T	1/4W 330
R7	ERDS2TJ391T	1/4W 390
R8	ERDS2TJ274T	1/4W 270K
R9	ERDS2TJ105T	1/4W 1M
R10	ERDS2TJ561T	1/4W 560
R11	ERDS2TJ330T	1/4W 33
R12	ERDS2TJ104T	1/4W 100K
R13	ERDS2TJ470T	1/4W 47
R15	ERDS2TJ391T	1/4W 390
R16	ERDS2TJ683T	1/4W 68K
R17	ERDS2TJ104T	1/4W 100K
R18	ERDS2TJ103T	1/4W 10K
R20	ERDS2TJ332T	1/4W 3.3K
R21	ERDS2TJ562T	1/4W 5.6K
R22	ERDS2TJ473T	1/4W 47K
R23	ERDS2TJ102T	1/4W 1K
R24, 25	ERDS2TJ103T	1/4W 10K
R27	ERDS2TJ151T	1/4W 150
R28, 29	ERDS2TJ471T	1/4W 470
R30	ERDS2TJ104T	1/4W 100K
R31	ERDS2TJ222T	1/4W 2.2K
R32	ERDS2TJ473T	1/4W 47K

Ref. No.	Part No.	Values & Remarks
R33-38	ERDS2TJ103T	1/4W 10K
R39	ERDS2TJ102T	1/4W 1K
R40	ERDS2TJ223T	1/4W 22K
R50-52	ERDS2TJ103T	1/4W 10K
R55	ERDS2TJ103T	1/4W 10K
R56	ERDS2TJ222T	1/4W 2.2K
R57	ERDS2TJ473T	1/4W 47K
R58	ERDS2TJ102T	1/4W 1K
R59	ERDS2TJ332T	1/4W 3.3K
R60	ERDS2TJ104T	1/4W 100K
R61	ERDS2TJ332T	1/4W 3.3K
R62, 63	ERDS2TJ681T	1/4W 680
R71	ERDS2TJ274T	1/4W 270K
R101	ERDS2TJ334T	1/4W 330K
R102	ERDS2TJ104T	1/4W 100K
R103	ERDS2TJ330T	1/4W 33
R104	ERDS2TJ332T	1/4W 3.3K
R105	ERDS2TJ562T	1/4W 5.6K
R106	ERDS2TJ272T	1/4W 2.7K
R107	ERDS2TJ103T	1/4W 10K
R108	ERDS2TJ473T	1/4W 47K
R109	ERDS2TJ153T	1/4W 15K
R110	ERDS2TJ332T	1/4W 3.3K
R111	ERDS2TJ104T	1/4W 100K
R112	ERDS2TJ224T	1/4W 220K
R114	ERDS2TJ101T	1/4W 100
R115	ERDS2TJ102T	1/4W 1K
R116	ERDS2TJ104T	1/4W 100K

Ref. No.	Part No.	Values & Remarks
R117	ERDS2TJ223T	1/4W 22K
R118	ERDS2TJ333T	1/4W 33K
R119	ERDS2TJ223T	1/4W 22K
R120	ERDS2TJ104T	1/4W 100K
R121	ERDS2TJ334T	1/4W 330K
R122	ERDS2TJ682T	1/4W 6.8K
R123	ERDS2TJ562T	1/4W 5.6K
R124	ERDS2TJ471T	1/4W 470
R125	ERDS2TJ103T	1/4W 10K
R126	ERDS2TJ683T	1/4W 68K
R127	ERDS2TJ391T	1/4W 390
R128	ERDS2TJ682T	1/4W 6.8K
R129	ERDS2TJ153T	1/4W 15K
R130	ERDS2TJ103T	1/4W 10K
R131	ERDS2TJ223T	1/4W 22K
R132	ERDS2TJ473T	1/4W 47K
R133	ERDS2TJ123T	1/4W 12K
R134	ERDS2TJ473T	1/4W 47K
R135	ERDS2TJ103T	1/4W 10K
R136, 137	ERDS2TJ104T	1/4W 100K
R138	ERDS2TJ2R7T	1/4W 2.7
R139	ERDS2TJ151T	1/4W 150
R140	ERDS2TJ332T	1/4W 1.3K
R143	ERDS2TJ334T	1/4W 330K
R145	ERDS2TJ101T	1/4W 100
R198	ERDS2TJ222T	1/4W 1.2K
R199	ERDS2TJ223T	1/4W 22K
R201	ERDS2TJ334T	1/4W 330K

Ref. No.	Part No.	Values & Remarks
R202	ERDS2TJ104T	1/4W 100K
R203	ERDS2TJ330T	1/4W 33
R204	ERDS2TJ332T	1/4W 3.3K
R205	ERDS2TJ562T	1/4W 5.6K
R206	ERDS2TJ272T	1/4W 2.7K
R207	ERDS2TJ103T	1/4W 10K
R208	ERDS2TJ473T	1/4W 47K
R209	ERDS2TJ153T	1/4W 15K
R210	ERDS2TJ332T	1/4W 3.3K
R211	ERDS2TJ104T	1/4W 100K
R212	ERDS2TJ224T	1/4W 220K
R214	ERDS2TJ101T	1/4W 100
R215	ERDS2TJ102T	1/4W 1K
R216	ERDS2TJ104T	1/4W 100K
R217	ERDS2TJ223T	1/4W 22K
R218	ERDS2TJ333T	1/4W 33K
R219	ERDS2TJ223T	1/4W 22K
R220	ERDS2TJ104T	1/4W 100K
R221	ERDS2TJ334T	1/4W 330K
R222	ERDS2TJ682T	1/4W 6.8K
R223	ERDS2TJ562T	1/4W 5.6K
R224	ERDS2TJ471T	1/4W 470
R225	ERDS2TJ103T	1/4W 10K
R226	ERDS2TJ683T	1/4W 68K
R227	ERDS2TJ391T	1/4W 390
R228	ERDS2TJ682T	1/4W 6.8K
R229	ERDS2TJ153T	1/4W 15K
R230	ERDS2TJ103T	1/4W 10K
R231	ERDS2TJ223T	1/4W 22K
R232	ERDS2TJ473T	1/4W 47K
R233	ERDS2TJ123T	1/4W 12K
R234	ERDS2TJ473T	1/4W 47K
R235	ERDS2TJ103T	1/4W 10K
R236, 237	ERDS2TJ104T	1/4W 100K
R238	ERDS2TJ2R7T	1/4W 2.7
R239	ERDS2TJ151T	1/4W 150
R240	ERDS2TJ332T	1/4W 3.3K
R243	ERDS2TJ334T	1/4W 330K
R245	ERDS2TJ101T	1/4W 100
R298	ERDS2TJ222T	1/4W 2.2K
R299	ERDS2TJ223T	1/4W 22K
R301	ERDS2TJ472T	1/4W 4.7K
R302	ERDS2TJ272T	1/4W 2.7K
R303	ERDS2TJ101T	1/4W 100
R304	ERDS2TJ223T	1/4W 22K
R305	ERDS2TJ101T	1/4W 100
R306	ERDS2TJ225T	1/4W 2.2M
R307	ERDS2TJ473T	1/4W 47K
R308	ERD25VJ101T	1/4W 100
R309	ERDS2TJ682T	1/4W 6.8K
R310	ERDS2TJ332T	1/4W 3.3K
R311	ERDS2TJ102T	1/4W 1K
R313, 314	ERDS2TJ102T	1/4W 1K
R316	ERDS2TJ103T	1/4W 10K
R317	ERDS2TJ472T	1/4W 4.7K
R319	ERDS2TJ103T	1/4W 10K
R320	ERDS2TJ123T	1/4W 12K
R321	ERDS2TJ4R7T	1/4W 4.7
R322, 323	ERDS2TJ472T	1/4W 4.7K
R324	ERDS2TJ332T	1/4W 3.3K
R325	ERD25VJ101T	1/4W 100
R326, 327	ERDS2TJ103T	1/4W 10K
R328	ERD25VJ101T	1/4W 100
R329	ERDS2TJ102T	1/4W 1K
R330, 331	ERDS2TJ104T	1/4W 100K
R332	ERDS2TJ472T	1/4W 4.7K
R333	ERDS2TJ334T	1/4W 330K
R334	ERDS2TJ102T	1/4W 1K
R335	ERDS2TJ472T	1/4W 4.7K
R336	ERDS2TJ102T	1/4W 1K
R337	ERDS2TJ2R7T	1/4W 2.7
R339	ERDS2TJ472T	1/4W 4.7K
R340	ERDS2TJ102T	1/4W 1K
R341	ERDS2TJ2R7T	1/4W 2.7
R342	ERDS2TJ333T	1/4W 33K
R343-345	ERDS2TJ472T	1/4W 4.7K
R348	ERDS2TJ103T	1/4W 10K
R349, 350	ERDS2TJ472T	1/4W 4.7K
R351-353	ERDS2TJ103T	1/4W 10K
R354	ERDS2TJ332T	1/4W 3.3K
R355	ERDS2TJ223T	1/4W 22K
R356	ERDS2TJ333T	1/4W 33K
R357	ERDS2TJ103T	1/4W 10K
R358	ERDS2TJ102T	1/4W 1K
R359, 360	ERDS2TJ103T	1/4W 10K
R361	ERDS2TJ472T	1/4W 4.7K
R362, 363	ERDS2TJ391T	1/4W 390
R364	ERDS2TJ103T	1/4W 10K
R365	ERDS2TJ153T	1/4W 15K
R366	ERDS2TJ223T	1/4W 22K
R367	ERDS2TJ103T	1/4W 10K
R368	ERDS2TJ473T	1/4W 47K
R369	ERDS2TJ682T	1/4W 6.8K
R370	ERDS2TJ272T	1/4W 2.7K
R373	ERD25VJ101T	1/4W 100
R374	ERDS2TJ102T	1/4W 1K
R375	ERDS2TJ106T	1/4W 10M
R376	ERDS2TJ682T	1/4W 6.8K
R377	ERDS2TJ1R0T	1/4W 1.0
R378	ERDS2TJ1R5T	1/4W 1.5
R380-382	ERDS2TJ102T	1/4W 1K
R383	ERDS2TJ473T	1/4W 47K
R384, 385	ERDS2TJ223T	1/4W 22K
R386	ERDS2TJ682T	1/4W 6.8K
R387	ERDS2TJ104T	1/4W 100K
R388	ERDS2TJ103T	1/4W 10K
R389	ERDS2TJ471T	1/4W 470
R390	ERDS2TJ102T	1/4W 1K
R396	ERDS2TJ102T	1/4W 1K
R398	ERDS2TJ682T	1/4W 6.8K
R701	ERDS2TJ472T	1/4W 4.7K
R702	ERDS2TJ103T	1/4W 10K
R705	ERDS2TJ103T	1/4W 10K
R706	ERDS2TJ823T	1/4W 82K
R707	ERDS2TJ123T	1/4W 12K
R708	ERDS2TJ683T	1/4W 68K
R710	ERDS2TJ333T	1/4W 33K
R711	ERDS2TJ105T	1/4W 1M
R712, 713	ERDS2TJ102T	1/4W 1K
R715	ERDS2TJ222T	1/4W 2.2K
R716	ERDS2TJ102T	1/4W 1K
R717	ERDS2TJ104T	1/4W 100K
R720	ERDS2TJ120T	1/4W 12
R721	ERDS2TJ471T	1/4W 470
R722	ERDS2TJ222T	1/4W 2.2K
R723	ERDS2TJ682T	1/4W 6.8K
R725	ERDS2TJ103T	1/4W 10K
R726	ERDS2TJ562T	1/4W 5.6K
R727	ERDS2TJ332T	1/4W 3.3K
R728	ERDS2TJ682T	1/4W 6.8K
R732	ERDS2TJ562T	1/4W 5.6K
R733	ERDS2TJ473T	1/4W 47K
R735	ERDS2TJ332T	1/4W 3.3K
R736	ERDS2TJ472T	1/4W 4.7K
R737	ERDS2TJ102T	1/4W 1K
R738	ERDS2TJ104T	1/4W 100K
R740	ERDS2TJ471T	1/4W 470
R741	ERDS2TJ102T	1/4W 1K
R742	ERDS2TJ104T	1/4W 100K
R743	ERDS2TJ471T	1/4W 470
R745	ERDS2TJ470T	1/4W 47
R746	ERDS2TJ223T	1/4W 22K
R747	ERDS2TJ561T	1/4W 560
R748	ERDS2TJ222T	1/4W 2.2K
R749	ERDS2TJ224T	1/4W 220K
R750-752	ERDS2TJ103T	1/4W 10K
R755	ERDS2TJ223T	1/4W 22K
R800-805	ERDS2TJ103T	1/4W 10K
R806	ERDS2TJ331T	1/4W 330
R807	ERDS2TJ223T	1/4W 22K
R808	ERDS2TJ103T	1/4W 10K
R809-811	ERDS2TJ104T	1/4W 100K
R812-816	ERDS2TJ103T	1/4W 10K
R817	ERDS2TJ124T	1/4W 120K
R818	ERDS2TJ106T	1/4W 10M
R819	ERDS2TJ334T	1/4W 330K

Ref. No.	Part No.	Values & Remarks
R820	ERDS2TJ105T	1/4W 1M
R821	ERDS2TJ101T	1/4W 100
R822, 823	ERDS2TJ472T	1/4W 4.7K
R824, 825	ERDS2TJ104T	1/4W 100K
R826	ERDS2TJ103T	1/4W 10K
R827	ERDS2TJ474T	1/4W 470K
R828, 829	ERDS2TJ102T	1/4W 1K
R830	ERDS2TJ104T	1/4W 100K
R831-836	ERDS2TJ474T	1/4W 470K
R837-839	ERDS2TJ103T	1/4W 10K
R840	ERDS2TJ472T	1/4W 4.7K
R841	ERDS2TJ471T	1/4W 470
R842, 843	ERDS2TJ472T	1/4W 4.7K
R844	ERDS2TJ471T	1/4W 470
R845	ERDS2TJ103T	1/4W 10K
R846	ERDS2TJ474T	1/4W 470K
R847	ERDS2TJ473T	1/4W 47K
R848	ERDS2TJ393T	1/4W 39K
R849	ERDS2TJ474T	1/4W 470K
R850	ERDS2TJ822T	1/4W 8.2K
R851-853	ERDS2TJ471T	1/4W 470
R854	ERDS2TJ151T	1/4W 150
R855	ERDS2TJ474T	1/4W 470K
R857	ERDS2TJ222T	1/4W 2.2K
R858	ERDS2TJ103T	1/4W 10K
R859	ERDS2TJ223T	1/4W 22K
R860	ERDS2TJ103T	1/4W 10K
R861	ERDS2TJ223T	1/4W 22K
R887, 888	ERDS2TJ102T	1/4W 1K
R889	ERDS2TJ472T	1/4W 4.7K
R891	ERDS2TJ103T	1/4W 10K
R892	ERDS2TJ683T	1/4W 68K
R895	ERDS2TJ102T	1/4W 1K
R897-899	ERDS2TJ103T	1/4W 10K
R900	ERDS2TJ471T	1/4W 470
R901	ERDS2TJ393T	1/4W 39K
		CAPACITORS
C1	ECBT1H180JC5	50V 18P
C2	ECBT1H102KB5	50V 1000P
C3	ECBT1H330J5	50V 33P
C4	ECBT1H102KB5	50V 1000P
C5	ECBT1C103MS5	16V 0.01U
C6, 7	ECBT1H181KB5	50V 180P
C8	ECBT1H102KB5	50V 1000P
C9	ECBT1H4R7KC5	50V 4.7P
C10	ECBT1H2R2KC5	50V 2.2P
C11, 12	ECBT1H102KB5	50V 1000P
C14, 15	ECBT1H102KB5	50V 1000P
C18	ECBT1H150JC5	50V 15P
C19	ECBT1H100JC5	50V 10P

Ref. No.	Part No.	Values & Remarks
C20	ECFT1C473MDY	16V 0.047U
C23	ECEA1HN010SB	50V 1U
C24	ECBT1C103MS5	16V 0.01U
C25	ECFT1C223MDY	16V 0.022U
C26	ECEA1CU101B	16V 100U
C27	ECBT1C103MS5	16V 0.01U
C29	ECEA1HU010B	50V 1U
C30	ECBT1H270J5	50V 27P
C31	ECEA1AU470B	10V 47U
C32	ECFT1C223MDY	16V 0.022U
C33, 34	ECEA1CU100B	16V 10U
C35	ECFT1C223MDY	16V 0.022U
C36	ECBT1H331KB5	50V 330P
C37	ECFT1C683MDY	16V 0.068U
C38, 39	ECFT1C823MDY	16V 0.082U
C40, 41	ECFT1C123MDY	16V 0.012U
C44	ECBT1H330J5	50V 33P
C45	ECFT1C223MDY	16V 0.022U
C46	ECEA0JU101B	6.3V 100U
C47	ECFT1C473MDY	16V 0.047U
C48	ECEA1CU100B	16V 10U
C49	ECBT1H270J5	50V 27P
C50	ECBT1H300J5	50V 30P
C51	ECBT1H102KB5	50V 1000P
C52	ECEA1EU3R3B	25V 3.3U
C53	ECEA1HU010B	50V 1U
C60	ECEA1HN010SB	50V 1U
C61	ECFT1C223MDY	16V 0.022U
C62	ECFT1C103MDY	16V 0.01U
C63	ECBT1H150JC5	50V 15P
C64, 65	ECFT1C223MDY	16V 0.022U
C66	ECBT1H102KB5	50V 1000P
C67	ECBT1H471KB5	50V 470P
C69	ECBT1C332MR5	16V 3300P
C70	ECFT1C103MDY	16V 0.01U
C71	ECBT1H102KB5	50V 1000P
C72	ECBT1H331KB5	50V 330P
C73	ECFT1C223MDY	16V 0.022U
C74	ECBT1H470J5	50V 47P
C78	ECBT1H331KB5	50V 330P
C82	ECBT1C103MS5	16V 0.01U
C101	ECEA50M1RB	50V 1U
C102	ECBT1H101KB5	50V 100P
C103	ECBT1H471KB5	50V 470P
C104	ECEA0JK101B	6.3V 100U
C105	ECFT1C333KDY	16V 0.033U
C106	ECEA1HK010B	50V 1U
C107	ECBT1C152MR5	16V 1500P
C108	ECEA1HK010B	50V 1U
C109	ECFT1C104MDY	16V 0.1U
C110	ECFT1C153KDY	16V 0.015U
C111	ECBT1H101KB5	50V 100P

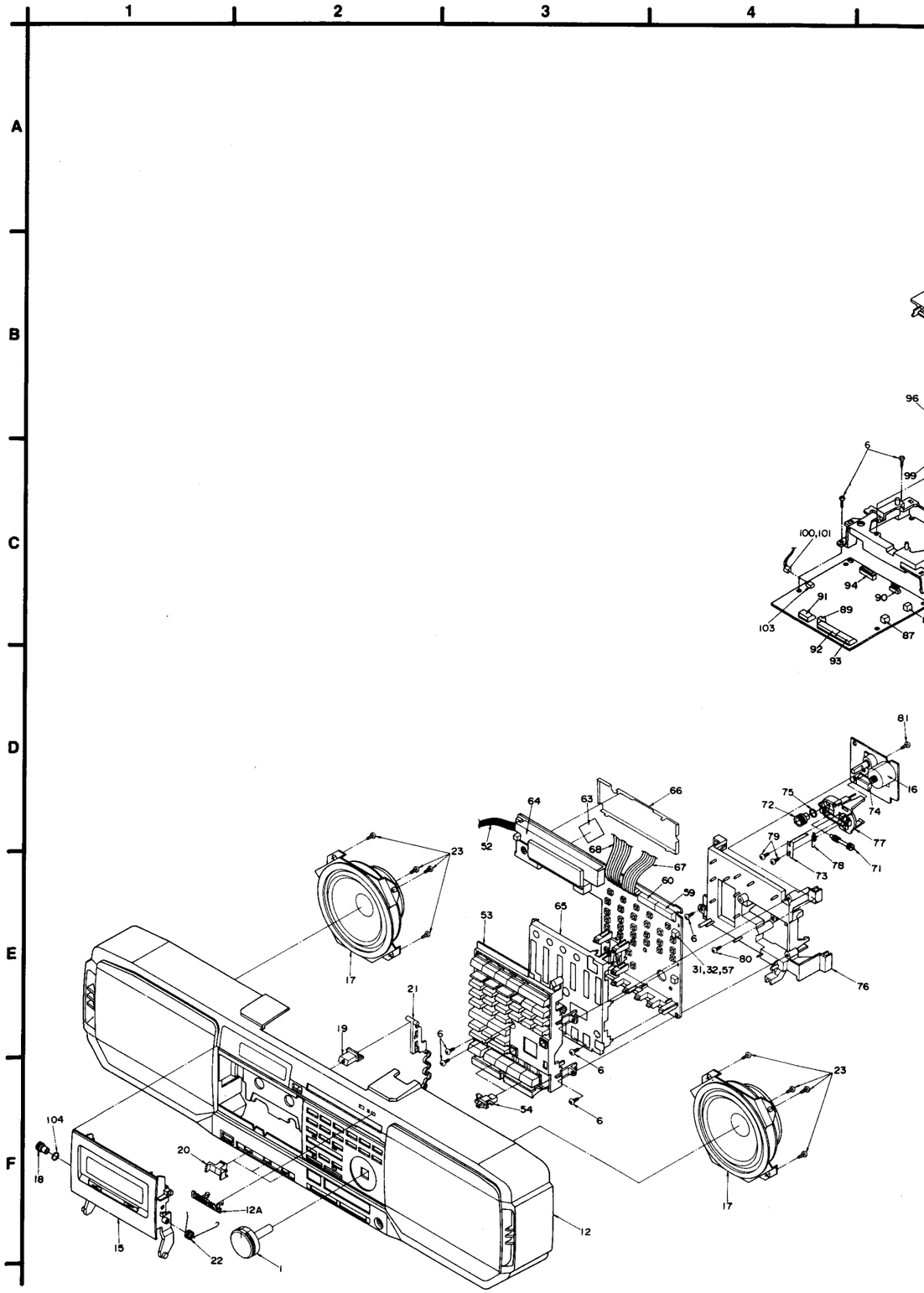
Ref. No.	Part No.	Values & Remarks
C112	ECEA1CK100B	16V 10U
C113	ECBT1C103MS5	16V 0.01U
C115, 116	ECEA1HK010B	50V 1U
C117	ECBT1H101KB5	50V 100P
C118, 119	ECEA1HK2R2B	50V 2.2U
C120	ECBT1C103MS5	16V 0.01U
C121	ECEA1HKR22B	50V 0.22U
C122	ECEA1CK100B	16V 10U
C123, 124	ECEA1AU101B	10V 100U
C125	ECEA1HKR33B	50V 0.33U
C126	ECBT1H471KB5	50V 470P
C127	ECEA1AU222E	10V 2200U
C128	ECQV1H224JZ3	50V 0.22U
C129	ECEA1HK010B	50V 1U
C130	ECBT1H101KB5	50V 100P
C150	ECEA0JU332E	6.3V 3300U
C151	ECBT1H101KB5	50V 100P
C201	ECEA50M1RB	50V 1U
C202	ECBT1H101KB5	50V 100P
C203	ECBT1H471KB5	50V 470P
C204	ECEA0JK101B	6.3V 100U
C205	ECFT1C333KDY	16V 0.033U
C206	ECEA1HK010B	50V 1U
C207	ECBT1C152MR5	16V 1500P
C208	ECEA1HK010B	50V 1U
C209	ECFT1C104MDY	16V 0.1U
C210	ECFT1C153KDY	16V 0.015U
C211	ECBT1H101KB5	50V 100P
C212	ECEA1CK100B	16V 10U
C213	ECBT1C103MS5	16V 0.01U
C215, 216	ECEA1HK010B	50V 1U
C217	ECBT1H101KB5	50V 100P
C218, 219	ECEA1HK2R2B	50V 2.2U
C220	ECBT1C103MS5	16V 0.01U
C221	ECEA1HKR22B	50V 0.22U
C222	ECEA1CK100B	16V 10U
C223, 224	ECEA1AU101B	10V 100U
C225	ECEA1HKR33B	50V 0.33U
C226	ECBT1H471KB5	50V 470P
C227	ECEA1AU222E	10V 2200U
C228	ECQV1H224JZ3	50V 0.22U
C229	ECEA1HK010B	50V 1U
C230	ECBT1H101KB5	50V 100P
C250	ECEA0JU332E	6.3V 3300U
C251	ECBT1H101KB5	50V 100P
C301	ECBT1H101KB5	50V 100P
C302	ECEA1AU101B	10V 100U
C303, 304	ECEA1CK100B	16V 10U
C305	ECEA1AU101B	10V 100U
C306	ECEA1AK330B	10V 33U
C307	ECEA1CK100B	16V 10U
C308	ECQV1H474JZ3	50V 0.47U

Ref. No.	Part No.	Values & Remarks
C310	ECQP2A392JZT	100V 3900P
C311	ECQP2A103JZT	100V 0.01U
C312	ECQP2A153JZT	100V 0.015U
C313	ECBT1C103MS5	16V 0.01U
C316	ECEA1HKD10B	50V 1U
C317	ECEA1AU101B	10V 100U
C318	ECQV1H473JZ3	50V 0.047U
C319, 320	ECBT1C332MR5	16V 3300P
C323	ECEA1AU221B	10V 220U
C326	ECEA1AK330B	10V 33U
C327	ECEA0JK101B	6.3V 100U
C328	ECEA1AK330B	10V 33U
C329	ECBT1C103MS5	16V 0.01U
C331	ECEA1HK010B	50V 1U
C332	ECEA1CK100B	16V 10U
C334	ECEA1AU101B	10V 100U
C335	ECEA1AU221B	10V 220U
C336	ECEA1EU221B	25V 220U
C337	ECQP2A822JZT	100V 8200P
C338	ECFT1C104MDY	16V 0.1U
C340, 341	ECEA1CK100B	16V 10U
C342	ECEA1AK330B	10V 33U
C343	ECEA1HK2R2B	50V 2.2U
C344	ECEA1AU101B	10V 100U
C345	ECEA1EU221B	25V 220U
C346	ECEA1AU471B	10V 470U
C348	ECEA1EU472	25V 4700U
C349	ECFT1C104MDY	16V 0.1U
C350	ECBT1C103MS5	16V 0.01U
C352-355	ECKT1H103ZF	50V 0.01U
C357	ECEA1AU101B	10V 100U
C358	ECEA1CK100B	16V 10U
C362	ECBT1C472MR5	16V 4700P
C365	ECBT1C103MS5	16V 0.01U
C366	ECEA1CK100B	16V 10U
C367	ECBT1H471KB5	50V 470P
C368	ECBT1C103MS5	16V 0.01U
C369	ECEA1AU101B	10V 100U
C374	ECEA1CK100B	16V 10U
C376, 377	ECEA1AU221B	10V 220U
C378	ECBT1H471KB5	50V 470P
C379	ECEA1CK100B	16V 10U
C380, 381	ECBT1C103MS5	16V 0.01U
C382	ECEA1AU101B	10V 100U
C701	ECEA0JU471B	6.3V 470U
C702	ECEA1AU221B	10V 220U
C703, 704	ECFT1C104MDY	16V 0.1U
C705	ECEA1CN100SB	16V 10U
C706	ECFT1C104MDY	16V 0.1U
C707	ECEA0JU101B	6.3V 100U
C708	ECBT1H681KB5	50V 680P
C710	ECEA1HU010B	50V 1U

Ref. No.	Part No.	Values & Remarks
C711	ECBT1H470J5	50V 47P
C712	ECEA1HU010B	50V 1U
C713	ECEA1HN010SB	50V 1U
C715	ECFT1C333KDY	16V 0.033U
C716	ECEA1HN010SB	50V 1U
C717	ECFT1C333KDY	16V 0.033U
C718	ECBT1H102KB5	50V 1000P
C720	ECEA1HNR47SB	50V 0.47U
C721	ECFT1C683MDY	16V 0.068U
C722	ECEA1HNR47SB	50V 0.47U
C723	ECEA1AN220SB	10V 22U
C725	ECFT1C104MDY	16V 0.1U
C726	ECQV1H334JZ3	50V 0.33U
C727	ECQV1H474JZ3	50V 0.47U
C728	ECEA1CU220B	16V 22U
C730	ECEA1CU220B	16V 22U
C733	ECBT1H390J5	50V 39P
C735	ECBT1H390J5	50V 39P
C736	ECFT1C104MDY	16V 0.1U
C737	ECEA0JU471B	6.3V 470U
C738	ECEA1CU100B	16V 10U
C741	ECBT1C103MS5	16V 0.01U
C742	ECEA0JU101B	6.3V 100U
C743	ECBT1H104ZF5	50V 0.1U
C747	ECBT1C332MR5	16V 3300P
C748	ECFT1C333KDY	16V 0.033U
C750	ECEA0JU101B	6.3V 100U
C751	ECFT1C333KDY	16V 0.033U
C752	ECEA1HUR33B	50V 0.33U
C753	ECEA1HPS010B	50V 1U
C755	ECEA1HPS010B	50V 1U
C756	ECBT1C332MR5	16V 3300P
C757	ECEA1CU100B	16V 10U
C758	ECBT1H104ZF5	50V 0.1U
C760	ECFT1C104MDY	16V 0.1U
C761	ECEA0JU471B	6.3V 470U
C762, 763	ECBT1H471KB5	50V 470P
C800-803	ECBT1H331KB5	50V 330P
C804, 805	ECBT1C103MS5	16V 0.01U
C806	ECEA0JK101B	6.3V 100U
C807, 808	ECBT1H102KB5	50V 1000P
C809	ECEA0JK101B	6.3V 100U
C810, 811	ECBT1H220JC5	50V 22P
C813	ECEA1CK100B	16V 10U
C814, 815	ECBT1H331KB5	50V 330P
C816	ECEA0JK101B	6.3V 100U
C817	ECBT1H101KB5	50V 100P
C818	ECBT1H151KB5	50V 150P
C820	ECBT1C103MS5	16V 0.01U
C821, 822	ECFT1C333KDY	16V 0.033U
C853	ECBT1C152MR5	16V 1500P
C854	ECFT1C473MDY	16V 0.047U

Ref. No.	Part No.	Values & Remarks
C855	ECBT1C152MR5	16V 1500P
C856	ECFT1C473MDY	16V 0.047U
C857	ECEA1AU221B	10V 220U

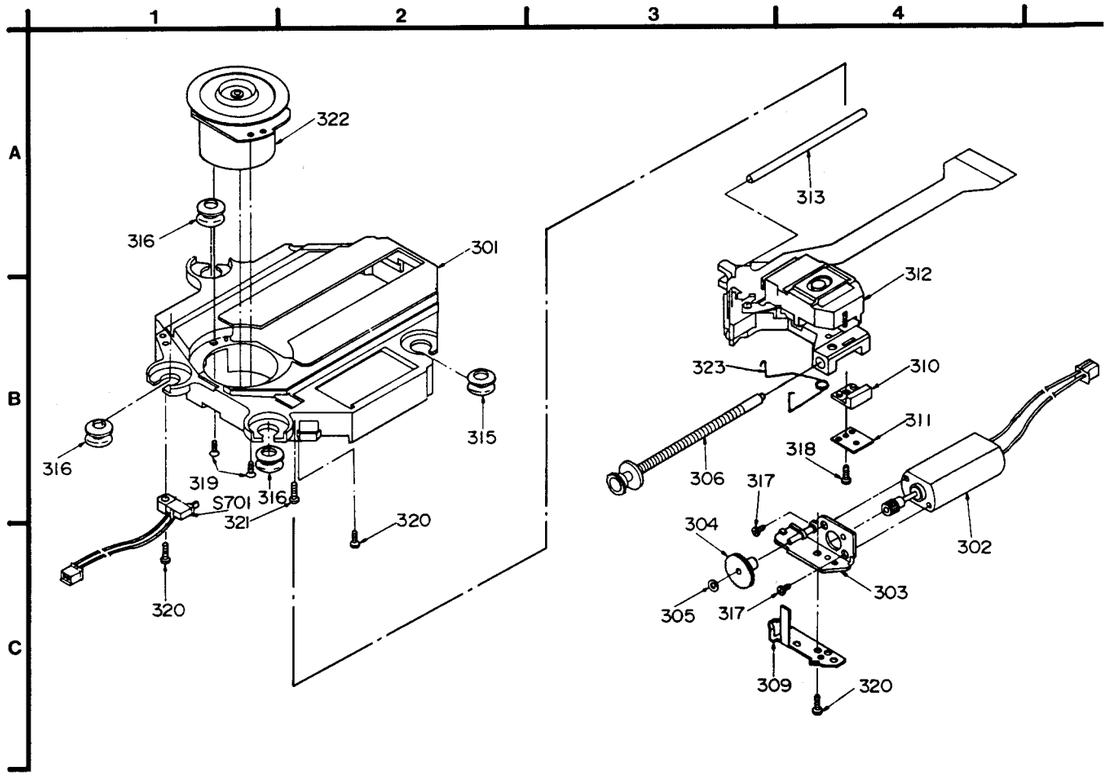
CABINET PARTS LOCATION



Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET PARTS	
1	RGW0023-K	KNOB, VOLUME	
2	RHD30006	SCREW	
3	RKK0003-K1	BATTERY COVER ASS'Y	
4	RMR0097	BOSS	
5	XTN3+12GFZ	SCREW	
6	XTV3+12G	SCREW	
7	XTV3+60G	SCREW	
8	RJS2L4ZA-X	SOCKET	
9	RJT807ZA-X	CONTACT	
10	RKH0003	HANDLE ASS'Y	
11	RKS0062	REAR CABINET ASS'Y	(EG)
11	RKS0063	REAR CABINET ASS'Y	(EB)
11A	RJR0010	TERMINAL	
12	RKM0096	FRONT CABINET ASS'Y	
12A	RGB301YA-0	BADGE	
13	RKF0105	CD COVER ASS'Y	
14	RYF0016	DISC HOLDER	
14A	RHM245ZA	MAGNET	
15	RKF0052	CASSETTE LID ASS'Y	
16	REM0006	VOLUME MOTOR ASS'Y	
17	EAS12P450A	SPEAKER	
18	RDG5782ZB	GEAR	
19	RGU0075-K	BUTTON, EJECT	
20	RGV0019-K	KNOB, REV MODE	
21	RML0045	LEVER, EJECT	
22	RUW170ZB	SPRING	
23	XTV3+10G	SCREW	
24	RJS4L3ZA-X	SOCKET	
25	RJT707ZA-X	CONTACT	
26	RGU0074-K1	BUTTON, CD EJECT	
27	RKQ0006-K	UPPER CABINET	
28	RME0025-1	SPRING	
29	RML0046	LEVER, CD EJECT	
31	RJS2L3ZA-X	SOCKET	
32	RJT707ZA-X	CONTACT	
33	RSC0029-1	SHIELD PLATE	
34	XEARR225DA-Y	TELESCOPIC ANTENNA	
35	XYN3+F12FY	SCREW	
36	RJC511ZB	BATTERY SPRING	
37	RJC751ZA	BATTERY SPRING	
38	RJP2G18ZA	CONNECTOR	
39	RJP5G18ZA	CONNECTOR	
40	RSC0043-1	SHIELD PLATE	
41	RMA0125	HEAT SINK	
42	RMY0007-1	HEAT SINK	
43	XTV3+10F	SCREW	
44	RWJ1106240QQ	FLAT CABLE	
45	RWJ1107290QQ	FLAT CABLE	
46	RWJ1109210QQ	FLAT CABLE	

Ref. No.	Part No.	Part Name & Description	Remarks
47	RWJ1109120QQ	FLAT CABLE	
48	RWJ1107160QQ	FLAT CABLE	
49	RWJ0712220QQ	FLAT CABLE	
50	RWJ1112220QQ	FLAT CABLE	
52	REX0032Y	LEAD WIRE ASS'Y	
53	RGU0076A-K	BUTTON, OPERATION	
54	RGV0012-K	KNOB, XBS/TONE	
55	RJF28ZA	FUSE HOLDER	⚠
56	RJP2G18ZA	CONNECTOR	
57	RJP2G9YA	CONNECTOR	
58	RJP4G4YA	CONNECTOR	
59	RJS12T7ZA	SOCKET	
60	RJS12T7ZA	SOCKET	
61	RJS3T5ZA	SOCKET	
62	RJS7T4ZA	SOCKET	
63	RMC1239ZA	SHIELD PLATE	
64	RMN0013-1	HOLDER, LCD	
65	RSC0028-1	SHIELD PLATE	
66	RSC0030-1	SHIELD PLATE	
67	RWJ1110120QQ	FLAT CABLE	
68	RWJ1112120QQ	FLAT CABLE	
69	RJS2L4ZA-X	SOCKET	
70	RJT807ZA-X	CONTACT	
71	RDG5953ZC	GEAR	
72	RDG5954ZA	GEAR	
73	RJR0019	TERMINAL	
74	RJS9T7ZA	SOCKET	
75	RMB0017-1	SPRING	
76	RMK0030	CHASSIS	
77	RUA867ZB	CHASSIS	
78	RUD129YA	SPRING	
79	XQN17+C33	SCREW	
80	XTN26+6G	SCREW	
81	XTV3+12G	SCREW	
82	RJP8G18ZA	CONNECTOR	
83	RJS7T4ZA	SOCKET	
84	RMC1236ZA	SHIELD PLATE	
85	RMA0069-1	COVER	
86	XTV3+6F	SCREW	
87	RJP2G18ZA	CONNECTOR	
88	RJP2G18ZA	CONNECTOR	
89	RJP2G18ZA	CONNECTOR	
90	RJP5G35ZA	CONNECTOR	
91	RJS6T7ZA	SOCKET	
92	RJS12T7ZA	SOCKET	
93	RJS10T7ZA	SOCKET	
94	RJS16Q11ZA	SOCKET	
95	RJS9T7ZA	SOCKET	
96	RHM281YA	PIN	
97	RUA849ZC	CHASSIS	
98	SHGD112	RUBBER	
99	SHGD113-1	RUBBER	

CD UNIT PARTS LOCATION

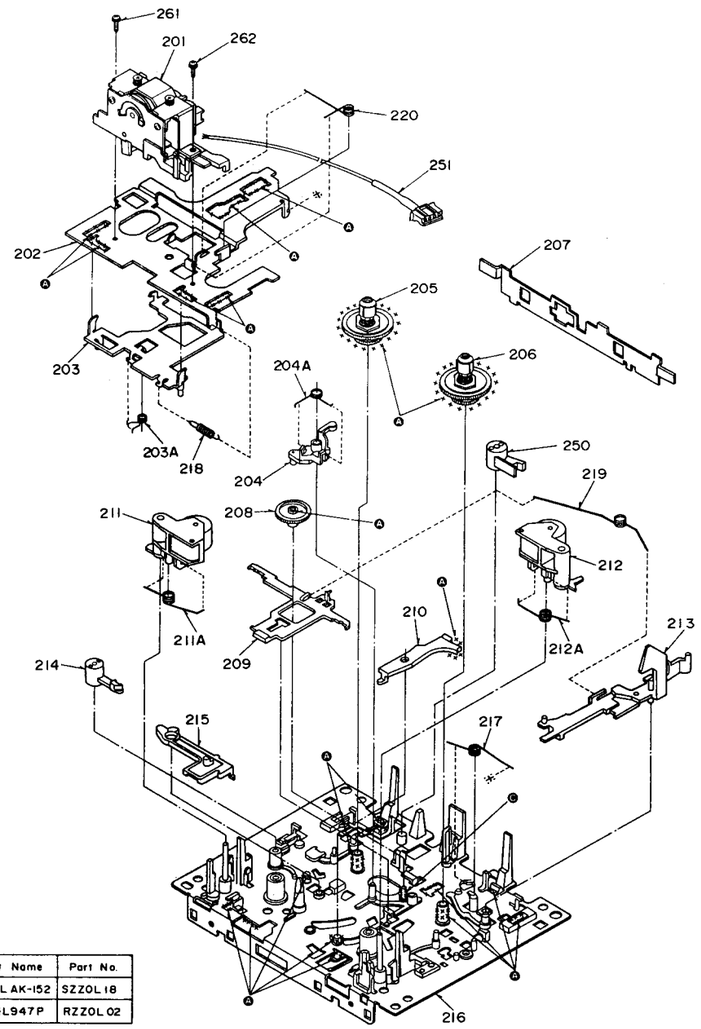


Ref. No.	Part No.	Part Name & Description	Remarks
100	RJS2L4ZA-X	SOCKET	
101	RJT807ZA-X	CONTACT	
102	RMR0131	HOLDER	
103	RJP2G17ZA	CONNECTOR	
104	RMR0037	WASHER	
		PACKING MATERIAL	
P1	RPK0071	GIFT BOX	
P2	RPN0166	PAD	
		ACCESSORIES	
A1	RJA20ZD-K	POWER CORD	⚠(EG)
A1	RJA86ZB-K	POWER CORD	⚠(EB)
A2	RQT0186-E	INSTRUCTIONS MANUAL	
A3	RAK-RX3001E	REMOTE CONTROL TRANSMITTER	

Ref. No.	Part No.	Part Name & Description	Remarks
		TRAVERSE UNIT	
301	SISD25-2	TRAVERSE BASE	
302	SDGD67-E	MOTOR ASS'Y	
303	SIWD110-E	MOTOR BASE ASS'Y	
304	SDGD62	GEAR	
305	SHWD35-1	STOPPER RING	
306	SUXD126-E	SHAFT	
309	SUWD120-3	SPRING	
310	SIRD110-2	PLATE	
311	SUWD121-1	SPRING PLATE	
312	SOAD101A	OPTICAL PICK UP	⚠
313	SUXD27-1	SHAFT	
315	SHGD112	RUBBER	
316	SHGD113-1	RUBBER	
317	XQN2+A2	SCREW	
318	XQN17+C3FZ	SCREW	
319	XQS2+A4FZT	SCREW	
320	SNSD38	SCREW	
321	XTS2+8J	SCREW	
322	SJGD13-A	MOTOR	
323	RUW183ZA	SPRING	

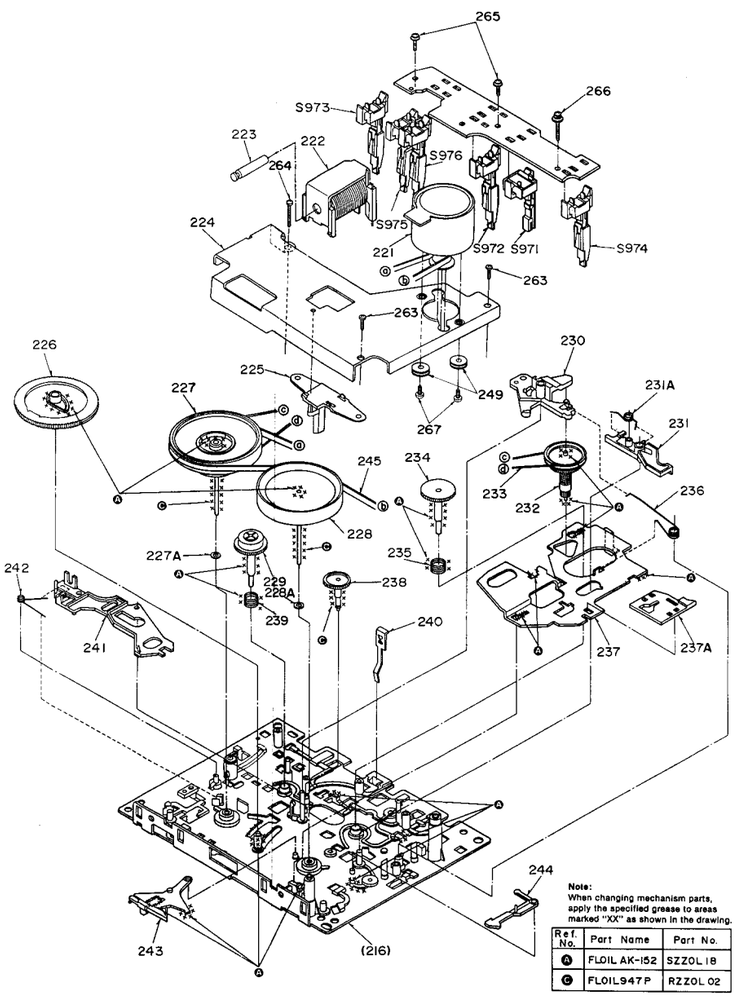
MECHANISM PARTS LOCATION

(TOP VIEW)



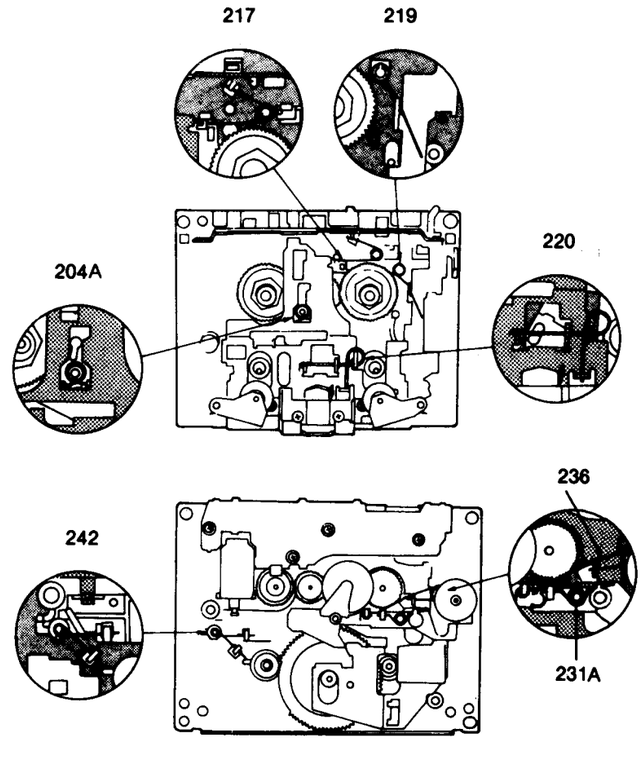
Ref. No.	Part Name	Part No.
A	FLOIL AK-152	SZZOL18
C	FLOIL947P	RZZOL02

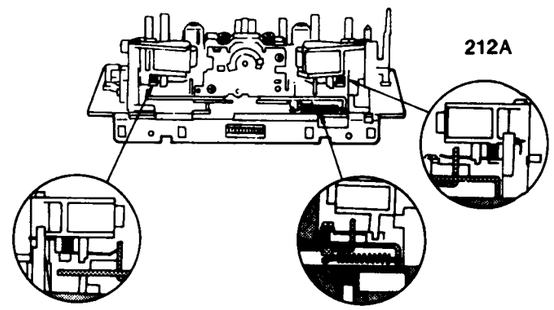
(BOTTOM VIEW)



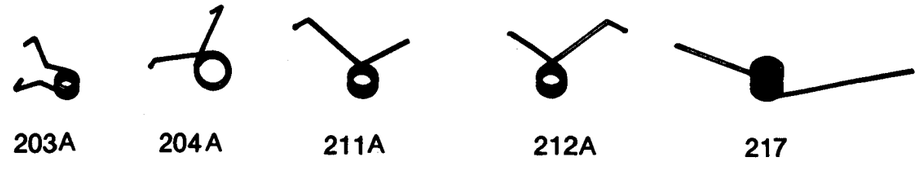
Note:
When changing mechanism parts, apply the specified grease to areas marked "XX" as shown in the drawing.

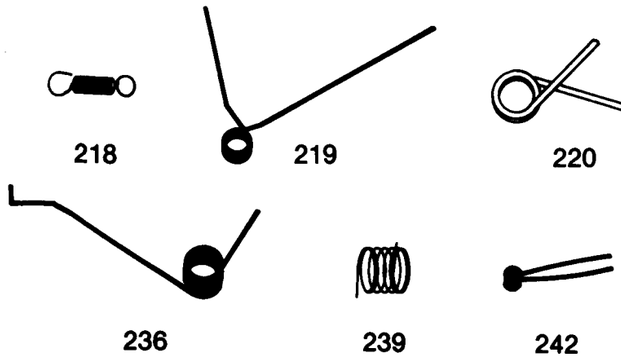
Ref. No.	Part Name	Part No.
A	FLOIL AK-152	SZZOL18
C	FLOIL947P	RZZOL02





- **SPRING ILLUSTRATION**
  The spring illustration used shows the actual size so it can be used to check the shape of the spring.
  (The illustration shows the spring separated from the mechanism.)





Ref. No.	Part No.	Part Name & Description	Remarks
		CASSETTE DECK	
201	RXQ0007	HEAD BLOCK ASS'Y (R/P)	
202	RUA793ZD	CHASSIS	
203	RZLAR300A	LEVER ASS'Y	
203A	RUW143ZA	SPRING	
204	1UB00089ZA	ARM	
204A	RUW148ZA	SPRING	
205	1DM00018ZA	REEL TABLE, REV	
206	1DM00017ZA	REEL TABLE, FWD	
207	RUB5022C	LEVER	
208	RDG5772ZB	GEAR	
209	RUB508ZA	LEVER	
210	RUB506ZB	LEVER	
211	1UB00088ZA	PINCH ROLLER, REV	
211A	RUW141Z	SPRING	
212	1UB00087ZA	PINCH ROLLER, FWD	
212A	RUW140ZB	SPRING	
213	RUB507ZC	LEVER	
214	RNL1ZD	ARM	
215	RUB503ZC	LEVER	
216	RZUAR300A	CHASSIS ASS'Y	
217	RUW142ZA	SPRING	
218	RUD105Z	SPRING	
219	RUW144ZA	SPRING	
220	RUW139ZA	SPRING	
221	RFM173ZA	MOTOR	
222	1UE0015ZA	SOLENOIDE ASS'Y	
223	RUB428ZE	SHAFT	
224	RUL1030ZC	ANGLE	
225	RMD5014ZB	BRACKET	
226	RDG5927ZG	GEAR	
227	1DW00037ZB	WHEEL	
227A	RNW139ZA	WASHER	
228	1DW0038ZB	WHEEL	
228A	RNW138Z	WASHER	
229	1DG0006ZA	GEAR ASS'Y	
230	RUB513ZC	LEVER	
231	1UB00091ZA	LEVER	
231A	RUW146ZA	TORSION SPRING	
232	1DR00112A	PULLEY ASS'Y	
233	RDV90ZB	BELT	
234	RDG5769ZA	GEAR	
235	RUQ111ZA	SPRING	
236	RUW145ZA	TORSION SPRING	
237	1UB00090ZA	ROD	
237A	RUB512ZB	LEVER	
238	RDG5773ZA	GEAR	
239	RUQ112ZA	SPRING	
240	RUS609ZC	SPRING	
241	RUB514ZB	LEVER	

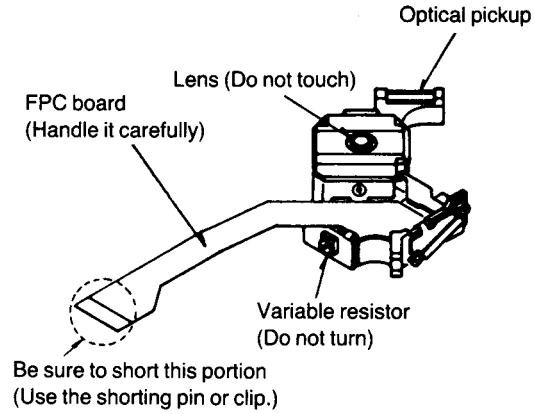
Ref. No.	Part No.	Part Name & Description	Remarks
242	RUW147ZA	TORSION SPRING	
243	RUB515ZA	LEVER	
244	RUB509ZA	LEVER	
245	RDV100ZA	BELT	
249	RHG3032ZA	RUBBER	
250	RNL180ZB	LEVER	
251	REX0062	WIRE ASS'Y	
261	XTW2+6L	SCREW	
262	XTW2+8L	SCREW	
263	XTN26+7J	SCREW	
264	RHE5203ZA	SCREW	
265	XTW2+8S	SCREW	
266	XYC2+JF16	SCREW	
267	QHQ1303	SCREW	

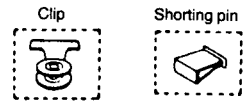
HANDLING PRECAUTIONS FOR OPTICAL PICKUP

The laser diode in the optical pickup may break down due to potential difference caused by static electricity of clothes or human body.
So, be careful of electrostatic breakdown during repair of the optical pickup.

• Handling of optical pickup

1. Do not give excessive shock to the optical pickup because it is of extremely precise structure.
2. To prevent the breakdown of the laser diode, an anti-static shorting pin is inserted into the flexible board. **(FPC board)**
   When removing or connecting the short pin, finish the job in as short time as possible.
3. Take care not to apply excessive stress to the flexible board. **(FPC board)**
4. Do not turn the variable resistor (laser power adjustment). It has already been adjusted.

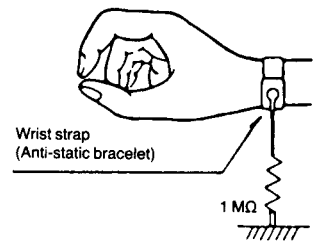


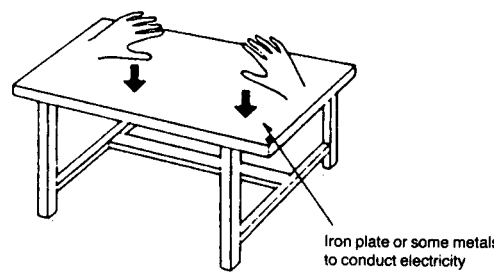


• Grounding for electrostatic breakdown prevention

1. Human body grounding
   Use the anti-static wrist strap to relieve the static electricity from your body.
2. Work table grounding
   Put a conductive material (sheet) or steel sheet on the area where the optical pickup is placed, and ground the sheet.

Caution:
The static electricity of your clothes will not be grounded through the wrist strap. So, take care not to let your clothes touch the optical pickup.





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